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ABSTRACT

Interviews with principals and school board presidents, site surveys of 32 randomly selected schools, achievement test scores, and in-depth studies by educators provided data describing educational programs, identifying educational problems, and revealing strategies to strengthen the 162 small rural high schools located in Alaskan communities of fewer than 1,000 residents and serving less than 100 students (mostly Eskimo and American Indian). Findings indicate: (1) most communities want village high schools as well as boarding school options; (2) replacement of boarding schools with village high schools has resulted in dramatically increased graduation rates; (3) high school size does not determine the quality of students' educational experiences or achievement on standardized tests; and (4) schools that are working well exhibit a strong teacher/community partnership, teacher/community agreement on a theme for the educational program, an enterprising teaching staff, and a central office that encourages adapting schooling to local needs. Successful strategies have been developed to increase course and teacher variety, provide vocational education, prepare students for college, raise achievement test scores, teach students about the outside world, and help rural students through the transition to adulthood. Tables provide statistics on curricular offerings, extracurricular activities, staffing, facilities, academic achievement, and vocational education. (NEC)

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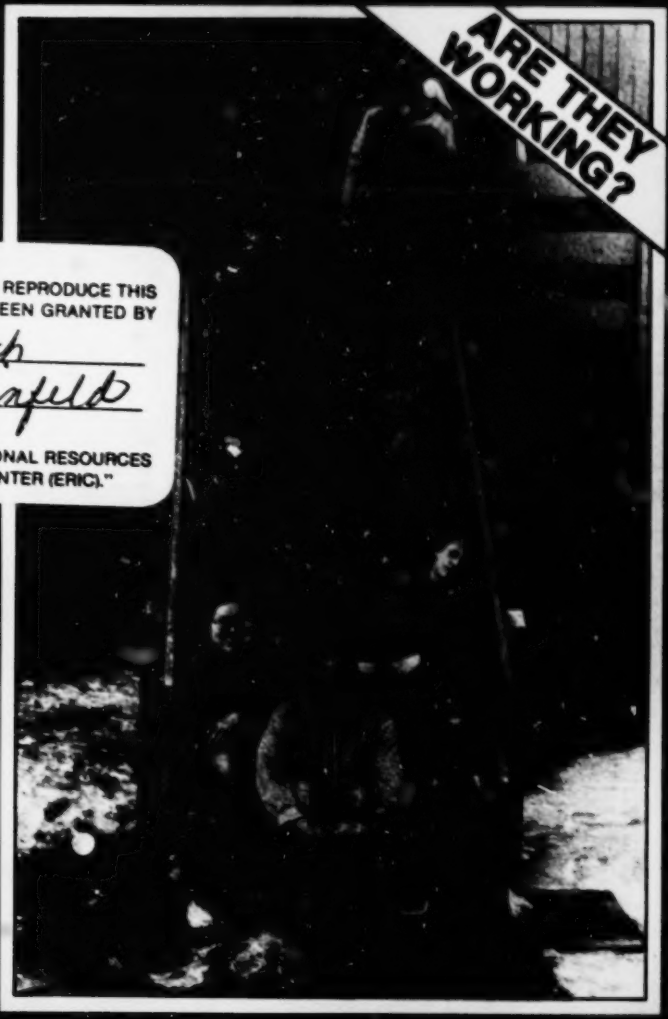
ALASKA'S SMALL RURAL HIGH SCHOOLS



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JUDITH S. KLEINFELD, G. WILLIAMSON MCDIARMID
AND DAVID HAGSTROM

ALASKA'S SMALL RURAL HIGH SCHOOLS

ARE THEY WORKING?

Judith S. Kleinfeld, G. Williamson McDiarmid,
and David Hagstrom

Institute of Social and Economic Research
Center for Cross-Cultural Studies

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ABSTRACT

Purpose

This report describes the educational programs that Alaska's small rural high schools offer, identifies educational problems these schools face, and examines the strategies that districts and schools have devised to strengthen these schools.

Methods

We defined a "small rural high school" as a high school with fewer than 100 students located in a community of fewer than 1,000 residents.

For each of the 162 small high schools, we gathered data from (1) principals through telephone interviews and mail-out surveys, (2) local board members and educators through visits to thirty-two randomly selected small high schools, (3) district school board presidents through telephone interviews, (4) achievement test scores, and (5) in-depth studies of small high school issues by Native and other teachers. Response rates for all our data collection efforts exceeded 90 percent.

Major Report Findings

1. Most rural communities want the village high schools. At the same time, however, they want some type of boarding school option.

2. High school graduation rates among rural students have greatly increased as a result of the replacement of boarding schools with local high schools.

3. Drop-out rates among students in small high schools are half the national average.

4. Some small high schools offer a high-quality educational program well adapted to local circumstances and community priorities. Others are having serious problems.

5. The size of the high school does not determine the quality of the students' educational experience. Other school characteristics are far more important:

   - A strong partnership between teachers and the community.
   - Agreement between teachers and the community on a theme for the education program.
   - An enterprising teaching staff.
   - A central office that encourages local professionals and the community to take the initiative in adapting schooling to local needs.

6. Districts and schools have developed many innovative strategies to address the problems inherent in small remote high schools. These problems include:

   - Limited numbers of teachers, courses, and activities.
   - Providing specialized vocational education.
   - College preparation.
   - Low achievement test scores.
   - Helping rural students become comfortable and competent in the world outside the village.
   - Difficult transitions to adult roles.

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PART I:
Introduction

In 1976, Alaska chose an approach to providing a high school education in remote rural villages that was both very unusual and very normal. Rather than sending students—mostly Eskimo and Indian students—away to boarding programs far from their homes, the state agreed to provide a high school in every village that wanted one.

Today, nearly a decade later, many people in the state are asking: *Are the students in these small and expensive high schools receiving a high-quality education?* Do the advantages that these schools offer—proximity to family and community, tutorials, travel, and other special programs—constitute a triumph for Native education? Or do the disadvantages—limited variety in teachers and courses, isolation, inadequate vocational or college preparation—condemn Native students to a second-rate education?

To answer these questions, we need to understand the alternative to the small high schools. What kind of education did the boarding schools offer village students? Below, we describe one student's experience with the state boarding program—an experience unfortunately common during the boarding school era.

From Boarding Schools to Small Rural High Schools
Going to Anchorage for High School in 1971

Staying close to her cousin, Emily walked silently off the

plane. The Anchorage airport swirled with strange white people. Coming from a village of 400 Yupik, Emily had never seen so many people—so many white people—all at once.

The Boarding Home Program coordinator drove Emily to the suburban split-level home where she was supposed to stay for the school year. The waxed wooden floors gleamed, and fresh finger-towels hung in the guest bathroom. The family was eager to have a teenage girl from another culture live with them that year, and the extra income helped out.

Emily was entering the ninth grade, but her test scores showed that she read below the sixth-grade level. Most village freshmen, the school district had found, could not do ninth grade work. The recently arrived village students typically huddled together in the back of the class, unwilling to speak. Although they didn't understand some of the words bandied about in class—"suspension," "prom," "detention"—they dared not admit it.

The district placed Emily and her cousin in the Rural Transition Center—a special program for village students held in a downtown store-front school. Emily studied English, mathematics, and social science in a three-teacher school very similar to contemporary village high schools. The district hoped to transfer Emily to a large comprehensive high school for her sophomore year.

Emily did not do well at the school. "She could do much better," one teacher said. "There are times when she exhibits extreme industriousness and scholarship. But she doesn't seem interested or motivated—by me anyway." Her teachers did not realize just how homesick Emily was. They saw her as "sullen and moody much of the time."

Emily was also having problems at her boarding home. In the village there had been no need to tell her parents where she was going or when she would return. In the city, her boarding home parents insisted that they know where she was at all times. Emily sometimes forgot. She soon found herself transferred to another home.

Just after Thanksgiving, Emily's second boarding home mother came into the program office distraught. She wanted to file a Missing Persons Report. Emily had not come home the night before.

The Boarding Home Program coordinator finally located Emily at a local motel. Emily said that she had wanted to call her boarding home parents, but she couldn't figure out how to use the telephone in the motel room.

Despite her troubles, Emily wanted to stay in Anchorage. "I don't want to ruin my education," she wrote in a letter to the boarding home coordinator. Her cousin testified that Emily had never gotten into trouble at home.

Emily went home for Christmas but then decided not to come back.

While we have changed all the identifying details, this is an actual case history of one student who went away to high school in Anchorage in 1971. While some students succeeded in the boarding home program, Emily's experience was not unusual.

In 1974 we followed the school careers of 105 village freshmen who entered three different types of boarding programs away from home: a boarding school, an urban boarding home program, and a rural boarding home program later replaced by a boarding school.[1] About *half* these students experienced *school-related* social and emotional problems.

Dropout rates for these programs were high.[2] Almost a

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[1]Judith Kleinfeld and Joseph Bloom, *A Long Way From Home* (Fairbanks, AK: Center for Northern Educational Research and Institute of Social, Economic, and Government Research, 1973).

[2]We report in the text drop-out rates for the 105 students we followed. *A Long Way From Home* also reports drop-out rates for all village students who entered boarding programs in the year 1971-72 and 1972-73. About 22 percent of the 1,724 village students who entered boarding programs in 1971-72 left that school year. About 34 percent of the 1,561 village students who entered boarding programs in 1972-73 left that school year. Most students did not leave school entirely but transferred from one program to another in a nomadic pattern.

quarter of the students left during their freshman year and others left over the summer. Only 46 percent completed their freshman and sophomore years in the same program. Some of these students left school altogether. But most shuttled from boarding program to boarding program, discontented with each in turn.

These boarding programs presented students with a wide array of courses and teachers. Such educational opportunities did not, however, translate into substantial growth in achievement. During their *two years away* at boarding school, the village students we studied *gained less than one and a half years* in reading achievement and *less than one year* in language achievement.[3]

Not all boarding situations produced high levels of social and emotional problems, high drop-out rates, and low achievement. In the early 1960s, for example, Mt. Edgecumbe graduated rural students who scored almost at grade level on standardized achievement tests.[4] Many Mt. Edgecumbe graduates later distinguished themselves as leaders in the Alaska Native Claims movement. During this period, however, admission to Mt. Edgecumbe was selective. In the early 1960s, the freshmen entering Mt. Edgecumbe scored almost at grade level on standardized achievement tests.

Students also succeeded in the Anchorage Boarding Home Program when they were especially mature and had strong academic backgrounds. Indeed, rural graduates of the Anchorage Boarding Program sometimes attended highly selective universities and generally did very well in college.

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[3]We gave the 105 students we were following the California Achievement Test when they entered high school and at the end of their freshman and sophomore years. Change is measured in grade-level equivalents.

We do not have comparable data that would allow us to see if today's village high school students are doing any better or any worse on achievement tests than the students who went away to boarding programs. Our basic point is that the boarding schools did not produce a year's gain in achievement for every year away at school.

[4]According to Mt. Edgecumbe records, in 1963, graduating seniors scored at the 11.2 grade level. Entering freshmen scored at the 8.2 grade level. Over the four years, students gained three grade levels.

In short, boarding programs worked only for a minority of rural students. In our earlier 1973 study of boarding programs, we used the following criteria for success: (1) the student stayed in the program; (2) the student did not develop severe or moderately severe school-related social and emotional problems (we did not count mild school-related problems); and (3) the student gained half a year or more in reading achievement during the full school year. *According to these criteria, only 23 percent of the 105 boarding students we followed in three different programs succeeded during their freshman year away from home.*

Staying Home in a Small Village High School is a Result of the Tobeluk Agreement of Settlement

Today a student like Emily goes to a small high school in her home village. The legal mandate for these village high schools results from a lawsuit Alaska Legal Services filed on behalf of 126 rural communities. The "agreement of settlement" reached in 1976 in the *Tobeluk v. Lind* case requires the state to provide a secondary program in every community that has an elementary school unless the community votes not to have a high school. [5]

In 1976, 110 of the 126 communities included in the original settlement chose to have a local high school program.[6] Of the 16 communities that originally declined the offer, ten later changed their minds.

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[5]The 1976 "Agreement of Settlement" in *Tobeluk v. Lind* (previously known as the Molly Hootch Case and now officially designated *Tobeluk v. Raynolds*) has been incorporated into state law. The regulations state that a school district must provide a local secondary education if the local school committee wants one, if the community has an elementary school program, and if there is one or more children available to attend the secondary school (4 AAC 05.040).

[6]Personal communication from Stephen E. Cotton, formerly with Alaska Legal Services, July 20, 1984. Mr. Cotton has continued to monitor compliance with the *Tobeluk v. Lind* settlement agreement.

Education in Small Rural High Schools is Expensive

By 1984 Alaska had spent nearly $143 million constructing high schools in small rural villages.[7] The most expensive building, on the remote island of Little Diomede in the Bering Sea, cost $4.2 million for about twenty high school students. Oil revenues from Alaska's North Slope made possible expenditures of this magnitude. *Tobeluk v. Lind* was the largest legal settlement in educational history.[8]

The annual costs of educating students in small remote high schools are also extremely high. In 1984, the state of Alaska spent a low of $3,900 per secondary student in certain communities on the road system. The state spent a high of $16,674 per secondary student in the most remote regions of the state.[9] Since most rural high school students are eligible for special federal program funds (such as Indian Education Act, Chapter 1, or Johnson O'Malley Act), total public expenditure for rural secondary education is even higher.

Do Small High Schools Provide a High-Quality Education?

Today a rural high school student like Emily attends a modern high school at home replete with personal computers, shop facilities, a gymnasium, and a library. Closets and storerooms may be chock-a-block with textbooks, lab equipment, typewriters, audiovisual materials, and other learning aids ordered and left as a legacy by now-departed teachers.

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[7] These statistics were provided by the Alaska Department of Education, *Tobeluk v. Lind* Consent Decree, Facility Construction Facility Report. The report is undated but contains statistics through 1984.

[8] Stephen G. Cotton, "Alaska's Molly Hootch Case: High Schools and the Village Voice," *Educational Research Quarterly*, 8(4), 1984: 30-43.

[9] These funding statistics were provided by the Alaska Department of Education, Management, Law, and Finance Division. The document is titled *Foundation Funding, Small High Schools in Alaska*, Revised Foundation Reports, 1984.

But these schools usually have few teachers and can offer mostly a basic academic program. A high school of sixteen students, for example, may have only two certified teachers—one of whom handles the English and social studies classes while the other teaches math and science.

Because the school is small, these teachers may know each student well and understand the type of educational help they need. The teachers may have taken advantage of the flexibility that small size offers to develop an educational approach tailored to the setting. They may have students research and write articles for a community newspaper as a way of teaching writing. They may have students learn to repair three-wheelers and outboard motors for community people as part of the vocational program. They may arrange a class trip to Anchorage so students can learn urban survival skills and explore career and college opportunities. They may make creative use of tutorials, peer teaching, and computer-assisted instruction.

While they may be imaginative in taking advantage of the opportunities a small school offers, these two teachers may not have the academic background to teach such subjects as chemistry or world history. The school may have no art or music program. While there may be enough students to field a basketball team, the school may offer only a few other extracurricular activities.

Certainly, these small high schools are safe, supportive environments, but they may be too safe. Working with the same small group of classmates, students may face little challenge or competition. Many students grow up, go to school, and graduate with the same group of students in the same isolated community.

Are rural students in these small high schools really receiving a high quality secondary education? Did the state of Alaska make a mistake in agreeing to establish a high school program in every community that wants one?

These are the questions worrying Native leaders who want to raise educational standards. These questions worry rural college students who find themselves unprepared for either the academic or social demands of college. These questions worry rural teachers

who know that some students might do well in a boarding program but that the departure of these bright and mature students would detract from the education of the students who remain. Finally, these questions worry state policymakers who wonder if the educational benefits of these small high schools are worth the enormous costs.

The Reopening of Mt. Edgecumbe as a State Boarding School Alternative

In 1984, uncertainty about the status of Mt. Edgecumbe High School, a Bureau of Indian Affairs boarding school in Sitka, pushed the question of the success of village high schools to the fore.

Mt. Edgecumbe operated as a statewide boarding school from 1946 until 1983, when the Bureau of Indian Affairs turned over its schools to the State of Alaska. The state policy question was: Should Alaska reopen Mt. Edgecumbe as a boarding school alternative to the small high schools? Native leaders who were educated at Mt. Edgecumbe saw the demise of the school both as a personal loss and as a foreclosing of options for rural Native students.

But even if the state did reopen the school, could the Mt. Edgecumbe of the 1980s recapture the success of the Mt. Edgecumbe of the 1950s? The Mt. Edgecumbe that Native leaders remember was an excellent school boasting a rich curriculum, a variety of interesting extracurricular activities, and high achievement levels. Chosen to attend for their intellectual promise, the 700-member student body produced a generation of Native leaders. The boarding school environment fostered the personal ties that later served to link together Native leaders from the various regions of Alaska. These networks, forged in the dormitories, classrooms, and gymnasium at Mt. Edgecumbe, helped create the unity that made the Alaska Native Land Claims Settlement Act possible.

If the state were to follow the wishes of these leaders and reopen Mt. Edgecumbe as a state-run boarding school, would it offer the same high-quality education that its graduates remem-

ber? Or did Mt. Edgecumbe benefit from enrolling the "best and the brightest" students from rural Alaska during the 40s, 50s, and 60s? Reopening Mt. Edgecumbe would cost the state about $3.8 million for about 175 boarding students in 1984 (almost $22,000 per student). Are there more effective and less expensive ways to strengthen rural secondary education?

In our study of small rural high schools, we set out to provide empirical information that would help policymakers address these kinds of questions. The state of Alaska did decide in 1985 to reopen Mt. Edgecumbe, but the fundamental question—how to provide the best high school education for isolated village students—still remains. Policymakers have debated this question for over twenty-five years. The same basic issues persist into each decade.[10]

A study of Alaska's small high schools conducted soon after they were established warned that they were in danger of failing.[11] What has happened to these small schools since then, as educators' attention shifted from constructing the buildings to creating the educational program?

Purpose and Methods

Study Objectives

To explore these broad questions—how well the small high schools are working and what policies the state of Alaska should pursue to strengthen rural secondary education—we asked more specific, empirical questions.

Our goals in this study were:

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[10]For historical background on the swings in Alaska state policy concerning Native secondary education, see Kleinfeld, *A Long Way From Home* (1973).

[11]Ray Barnhardt, *Small High School Programs for Rural Alaska: Vol. I* (Fairbanks, Alaska: School of Education, Center for Cross-Cultural Studies, 1979).

1. *To describe the small high schools* in rural Alaska—their number and size, curriculum, extracurricular activities, staffing arrangements, facilities, etc.

2. *To identify the needs* of the small high schools—as seen by parents, community members, school board presidents, students, school staff, and college students from rural areas.

3. *To identify the strategies* that districts and schools have devised to take advantage of the educational opportunities small high schools offer and to deal with the problems posed by their small size, cultural differences, and remoteness.

The Danger of Overgeneralizing

We are well aware that schools in different communities face vastly different problems. In the course of this study, we visited a wide range of schools—from two-student schools in cosmopolitan fishing villages, to fifteen-student schools in communities on the road system, to forty-student schools in isolated Yupik communities where English is a second language. Some of the schools had been open for 20 years. Others had just started and were struggling to establish an identity and traditions.

The findings we report are generalizations. They may or may not apply to a particular high school. We ask readers to use their own judgment and experience in deciding whether the findings we describe can be applied to situations they are concerned about.

Definition of a Small Rural High School

For this study, we defined a small rural high school as a school of fewer than 100 ninth through twelfth grade students located in a rural community with less than 1,000 residents. This definition means that our study is *not* restricted to the high schools established since 1976 under the *Tobeluk v. Lind* agreement. We included other small rural high schools for two

reasons. First, many of the problems that some of the newly established village high schools have encountered may be the result of their being new more than their being small. Second, the older small high schools may have worked out innovative educational strategies to deal with small size. We wanted to examine these strategies.

Enrollment in Alaska's Small Rural High Schools

In 1984, about 3,700 Alaskan students attended 162 small high schools.[12] Most rural students (77 percent) attended high schools of twenty to one hundred students (Table 1). But some students (8 percent) attended high schools of ten or fewer students.

Even though most rural students attend the "bigger" schools, Alaska still has many very small high schools. Indeed, fifty-two small high schools enrolled ten or fewer students.

Stereotypes About Small Rural High Schools

People typically assume that Alaska's small rural high schools enroll Native students, were established recently as a result of the Hootch case, and are located in Rural Educational Attendance Areas. These stereotypes are not correct.

Not all the small high schools enroll mostly Native students. Of the high schools, 75 percent are predominantly Native (80 percent or more). But the remaining 25 percent of the schools

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[12]We identified 162 small high schools (9th through 12th grades) in Alaska in 1984. The total number of high schools shifts slightly each year for several reasons. First, the smallest high schools may not have a twelfth-grade student in a particular year and thus offer only a partial high school program. Second, when high schools are very small, a program can disappear or be established depending on the wishes of a few families. In one community we visited, for example, the high-school-age students consisted of two sisters and the best girl friend of the older sister. One of the young women had been raped and decided she could no longer stay in the community. Her best friend decided she would go out to boarding school with her. Her younger sister decided to join them.

enroll predominantly non-Native students or a mixed Native and non-Native group. These latter schools are mostly found along the highway system, in logging camps, or in regional service centers.

Table 1

Most Rural High School Students Attend High Schools of 20 to 100 Students

Size of School	Approximate Number of Schools	Proportion of Schools	Approximate Number of Students	Proportion of Students
10 students or fewer*	52	32%	305	8%
11-20 students	36	22	548	15
21-40 students	47	29	1388	38
41-100 students	27	17	1445	39
N =	162	100%	3686	100%

*These very small high schools are unstable in numbers. They increase or decline from year to year depending on the numbers of students in particular grade levels and whether the community and district decide the school should remain open.

Source: ISER Small High School Survey, 1984.

Not all small rural high schools are so-called "Hootch" schools—constructed as a result of the Molly Hootch and Anna Tobeluk lawsuits against the State of Alaska. Of the 162 schools operating in 1984, 36 existed before the settlement agreement. Indeed, one of the arguments Alaska Legal Services advanced in the *Tobeluk v. Lind* lawsuit was that small non-Native communities enjoyed their own local high schools, while Native communities of the same size or larger did not.

Not all the small high schools are part of "Rural Educational Attendance Areas" (REAAs). The REAAs differ from the other Alaska organizational structures for schools—independent city districts and borough districts—in their lack of local taxing power:

They are entirely state and federally funded. Many of the small rural high schools that existed prior to the Tobeluk settlement agreement were already organized as independent city or borough school districts. Finally, some of the "Hootch" schools have, since 1976, chosen to leave their REAAs and form independent city districts.

Methods

We briefly describe our methods below. Please see Appendix II for a detailed description of each of our five study components (Figure 1).

1. Collection of Basic Information on All Village High Schools through Principal Surveys

- Since village high schools differ widely, we collected information on each of the 162 village high schools operating in 1984. The information we collected on each school covered such areas as enrollment, staffing, curriculum, extracurricular activities, special programs, and facilities.

- We also obtained the principal's perception of the particular problems the school faced, major areas of educational strength and weakness, and the particular strategies the school was using to overcome limitations posed by small size and remote location.

- Finally, we collected achievement test scores for each small high school.

2. Visits to Thirty-Two Randomly Sampled Village High Schools

We collected the basic information described above by means of telephone interviews with principals, surveys sent to the school, and similar data collection strategies. We could not, however, use surveys or telephone interviews to obtain community or student views. Talking to community people or students required visits to the site and more personal "kitchen table" interviews.

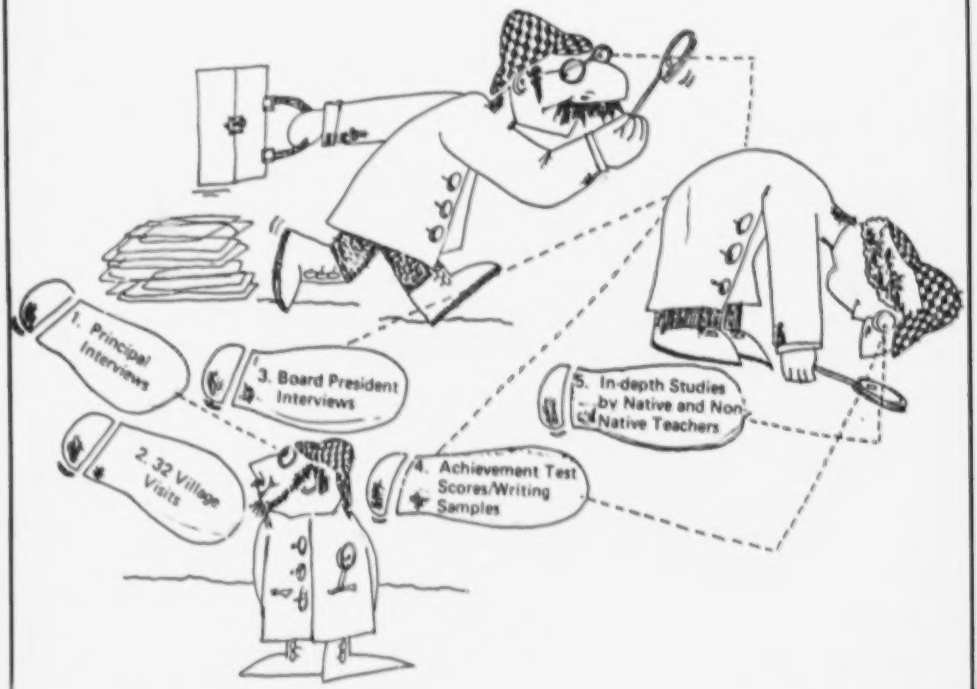
1. Principal Interviews
2. 32 Village Visits
3. Board President Interviews
4. Achievement Test Scores/Writing Samples
5. In-depth Studies by Native and Non-Native Teachers

Figure 1

Small High School Project Methods

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For this reason, we visited thirty-two small high schools randomly sampled by size and region. At each site, we talked to each member of the community school committee and community people working at the high school. The interviewers asked about advantages and disadvantages of small high schools, boarding school options, and strengths and weaknesses of the school program. We surveyed all small high school students on the advantages, disadvantages, and improvements needed in their high schools. We also observed classes, talked with students and teachers informally, and collected samples of students' written work.

3. School Board President Interviews

We conducted telephone interviews with thirty-one of the thirty-five (about 90 percent) school board presidents whose districts included a small rural high school.

The interview focused on board presidents' views of the strengths and weaknesses of small high schools and innovative strategies their districts were using to strengthen these schools.

4. Collection of Achievement Test Scores

We collected standardized test scores from 95 percent of Alaska's small rural high schools during site visits or from the district office.

5. In-depth Studies of Small High Schools by Local Native and non-Native Educators

Since short village visits could not give us a rich understanding of small high schools, we also worked with seven local Native educators and three non-Native educators on special studies of small high school issues in their community. One Native educator, for example, did informal interviews in Yupik with community elders in the steambath. (What gives us additional confidence in our findings is that the results from the statewide survey and the steambath are virtually identical.)

Exceptionally High Response Rates

Due to the generous cooperation of rural communities and rural educators, we have enjoyed exceptionally high response rates—*typically exceeding 90 percent and reaching 100 percent* in certain study components.

Use of Tests of Statistical Significance

Readers accustomed to seeing tests of statistical significance adorning research reports may be surprised by their absence in this one. We do not use such tests because it is incorrect to do so with the type of data we have collected.

Tests of statistical significance are properly used when a researcher is interested in making generalizable statements about a population based on a representative sample. In the major components of our study, we did not draw a sample: We collected information from the entire population. Statistical tests are thus inappropriate.

We did randomly sample small high schools in thirty-two communities. We interviewed community board members and students at these sites. While these thirty-two sites were randomly selected to avoid bias, they do not constitute a generalizable sample. To create a generalizable sample we would have had to visit over 100 communities; the cost of such research would be prohibitive. Thus, results from the site visits are illustrative. Statistical tests of significance are inappropriate.

Organization of Report

This report is divided into five parts.

- Part I introduces the report. Part II discusses both what rural residents and rural educators see as the advantages and disadvantages of small high schools, as well as their preferences for local high schools versus boarding schools.

- Part III documents the dramatic effects of small high schools on the high school graduation rates of rural students. We also present profiles of small high schools that are working and those that are not working and discuss the characteristics of the successful schools.

- Part IV identifies major educational problems of small high schools and the strategies that districts and schools have developed to address these problems. Part V presents conclusions.

- Appendix I presents detailed statistical information on small high school staffing, curriculum, extracurricular activities, facilities, etc. Appendix II presents the study methods in detail.

Other Publications from the Small High School Project

This report presents the major findings of the Small High School Project. An Executive Summary is also available.

We have also produced two other publications:

1. *Alaska's Village High Schools: How Rural School Board Presidents See Them* (Fairbanks: University of Alaska, 1985). This report describes how rural school board presidents view the advantages and disadvantages of small high schools and the policy options they favor.

2. *Mt. Edgecumbe and the Small High Schools* (Fairbanks: University of Alaska, 1985). This paper discusses policy options for the use of Mt. Edgecumbe and other policies for strengthening rural secondary schools.

A subsequent publication (*The Teacher as Inventor: Innovation in Small Rural High Schools*) will describe in detail successful educational strategies that small high schools in Alaska have developed. In this report, we mention such strategies briefly.

Summary of Findings: Part II

1. Most people in rural Alaska—be they local board members, district board presidents, or principals—support and do not want to lose the small high schools.

2. Non-Native communities want small local high schools as much as Native communities.

3. Rural residents and rural educators see major advantages in small high schools, and statistical evidence verifies these advantages:

- Children can grow up at home with their families.
- Student-teacher ratios are low, so students receive much individual attention.
- Students have greater opportunity to hold key roles in school activities, and they have greater access to such scarce resources as travel programs and computers.
- Graduation rates have increased dramatically.
- Parents exert considerable formal and informal control over local schools.
- Most small high schools in Native communities teach local cultural traditions, economic skills, and Native languages.
- Small high schools provide important community services, increase local employment, and have increased or stabilized village population.

4. Rural residents and rural educators realize the disadvantages of small high schools, and statistical evidence verifies these disadvantages. These schools:

- Offer few advanced or specialized courses.
- Offer few extracurricular activities and recreational facilities.
- Have few teachers, and many of these instruct in subjects outside their specialization.
- Provide limited exposure to the world outside the village.

5. Most rural residents and educators want choice; they favor a boarding option. Students who need or want a boarding option include: (a) social referrals, (b) academically advanced students in very small high schools, and (c) students who want more activities and social life.

6. Opinions are highly divided as to exactly what this boarding option should be. Almost half of the rural residents we interviewed, for example, want a boarding option within the school district or region; about a third think Mt Edgecumbe should be re-opened as a statewide boarding school.

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PART II:
Most Rural Communities and Rural Educators Want Village High Schools—and a Boarding School Option

Introduction

In this section, we will examine rural residents' and rural educators' attitudes toward small high schools and boarding schools. We also present statistical information documenting the accuracy of people's views concerning the advantages and disadvantages of small high schools.

Presentation of Findings

Finding No. 1: Most people interviewed in rural Alaska—be they local board members, district board presidents, or principals—support the small high schools and do not want to lose them.

At the time of the *Tobeluk v. Lind* settlement agreement in 1976, most communities wanted a local high school. Has their subsequent experience with these small schools changed their attitude? Most of the community people and district board presidents we interviewed had personal experiences with both the boarding schools and the small high schools. Either they, their children, or close relatives had attended each type of school. We expected that some of these individuals might compare small local

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high schools unfavorably with the large comprehensive boarding schools.

Our results suggest, however, strong support for the small high schools along with a desire for a boarding school option. Local board members, principals, and district board presidents proved to be aware of both the disadvantages and the advantages of the small schools. When we asked them whether or not they supported the local high schools, the vast majority said that they did (Figure 2). At the same time, most people wanted choice—a boarding school option—whether or not they thought many students would actually want to leave their local high school (Figure 3).

Finding No. 2: Non-Native communities want small local high schools as much as Native Communities.

People in communities that are predominantly non-Native are just as likely to favor the small schools as people in predominantly Native communities. Indeed, non-Native rural communities used their political skills to secure local high schools years before the *Tobeluk v. Lind* suit brought local schools to Native children.

Finding No. 3: Rural residents and rural educators see major advantages as well as disadvantages in small high schools.

Local board members, district board presidents, and high school principals agree on the basic advantages and disadvantages of small high schools. Below, we summarize the advantages. A later section discusses the disadvantages.

1. Children can grow up at home with their families.

Above all, the village high schools allow students to stay with their families while attending high school. Parents said that they had worried about their children when they had to attend distant

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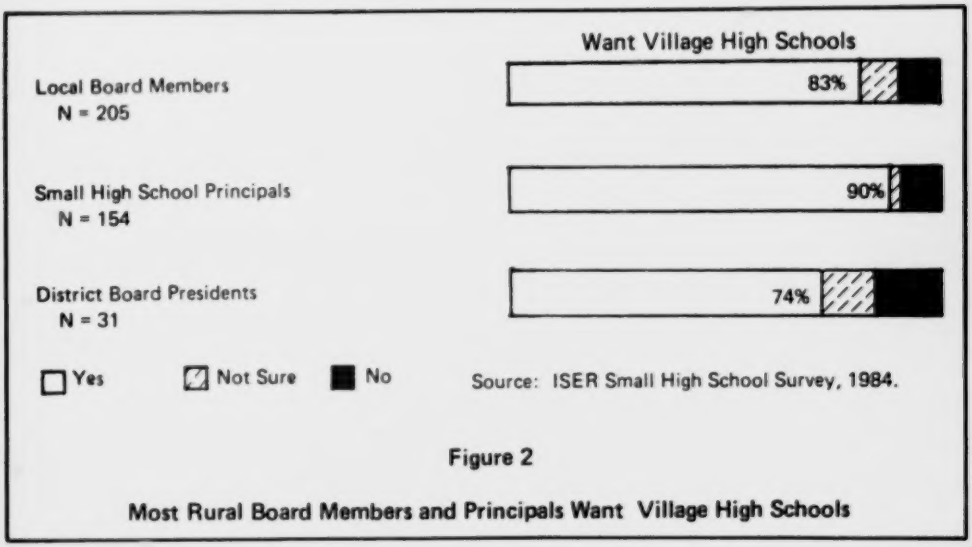

Figure 2

Most Rural Board Members and Principals Want Village High Schools

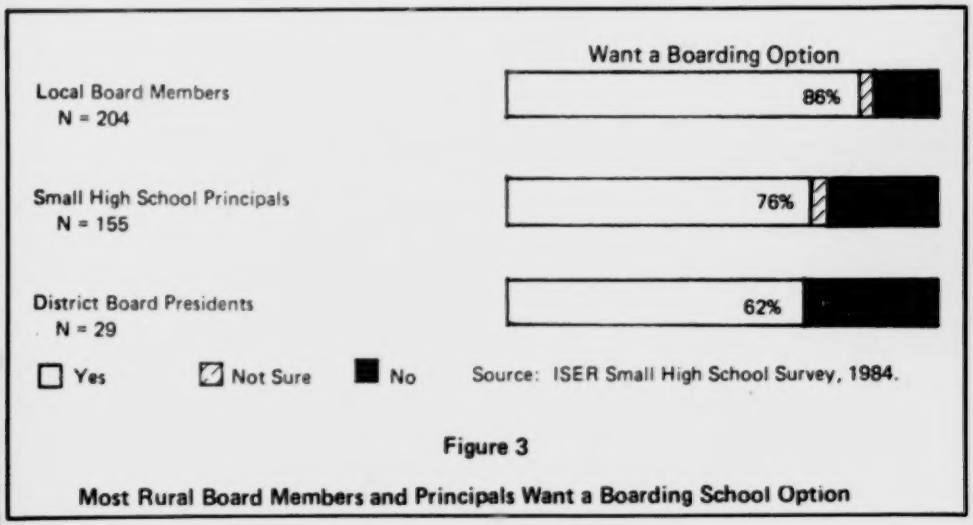

Figure 3

Most Rural Board Members and Principals Want a Boarding School Option

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EXHIBIT A

Examples of Rural Community and Rural Educators' Support for Village High Schools

Native Community School Committee Member:

"We can have our kids at home . . . . We can go to the school, find out what they're taking, talk to their teachers, and get reports on how they're doing . . . . I want to raise my child. I don't want an agency raising her."

Non-Native Community School Committee Member:

"I feel that in our community our high school is very adequate. In boarding schools children are taken away from their home setting, and you do do not have the home element, which I feel is very important."

Small High School Principal:

"Realistically, most of the students—due to family background—are better suited to staying home. As long as the expectations for proper academics are kept up I think the village high school is a good idea . . . . From the opening of the door to now we're trying to up test scores and gear students toward college. I think it's been a growing process and we're still moving ahead."

boarding schools. Perhaps the children would get sick, have an accident, or get into trouble. They became homesick, and their parents missed them. Parents added that sending children away to school was expensive. The families had to cover the costs of new clothes and unscheduled trips home.

With their children at home, parents can monitor their children's progress at school. They can watch them perform in athletic and musical events. They can see them graduate. They can follow the unfolding of their children's lives.

2. In small high schools, student-teacher ratios are very low, and students receive a great deal of individualized attention.

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Both parents and teachers stressed that a major advantage of small schools is that children get a great deal of individual attention. A few of the non-Native parents we interviewed said that they had deliberately chosen to work in small communities so that their children would receive just this kind of attention. In the following chapter we review the numerous research studies that support these parents' views: students in fact learn better when classes are very small.

3. Small rural high schools offer students many opportunities to participate in extracurricular activities and to enjoy access to scarce educational resources, such as travel programs and computer time.

While students in small high schools may lack the advantages afforded by a greater variety in courses, teachers, and extracurricular activities, they have greater access to other educational resources. Since there are fewer students, each student gets more time to use computers.[1] Each student has many more chances to travel, through such programs as Close-Up, the Rural Student Vocational Program (RSVP), school trips, and athletic trips.[2]

Students in small schools have greater participation opportunities.[3] They have a much better chance, for example, of making the basketball team. They are also more likely to play key roles in such organizations as the yearbook or the newspaper staff.

4. Since the creation of the small high schools, graduation rates have increased dramatically.

Rural students are much less likely to drop out of school

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[1]Table 16 in the fourth section of this report presents statistics documenting the high computer-to-student ratio in most rural high schools.

[2]Table 21 in the fourth section of this report presents statistics documenting the great amount of travel available to students in rural high schools.

[3]Well-regarded research documents the view of parents that small schools afford greater participation opportunities. See especially R.B. Barker, *Big School, Small School: Studies of the Effects of High School Size Upon the Behavior and Experiences of Students* (Stanford: Stanford University Press, 1964).

when they can attend school at home. As a result, the number of high school graduates has climbed (Figures 4 and 5).[4]

5. In small rural high schools, parents can exert considerable control—both formal and informal—over their schools.

Many of the community school committee members told us that they "have a lot to say about what is going on in the school."

The degree of community participation in school decision-making varies from village to village. Some informants complain that the district office disregards their wishes, especially when they want to employ or to get rid of a particular principal or teacher. Others feel they are "involved to a fault" in local school decisions.

In large part, increased community control is simply due to the high schools now being located in the villages. Parents serve on community school committees and other local boards that make decisions about programs and the allocation of certain school funds. Parents also monitor the schools informally and communicate their concerns immediately and directly to the staff.

6. Small high schools enable local communities to transmit cultural traditions and to emphasize Native languages where the community wants to do so.

In many villages, residents feel strongly about maintaining their identity as a people, passing on cultural values, retaining their Native language, and teaching young people subsistence skills they feel are critical to economic survival in an unpredictable world. Most local high schools in Native communities offer instruction in land claims and corporation issues, local economic skills, community history and cultural traditions, and Native languages (Figure 6).

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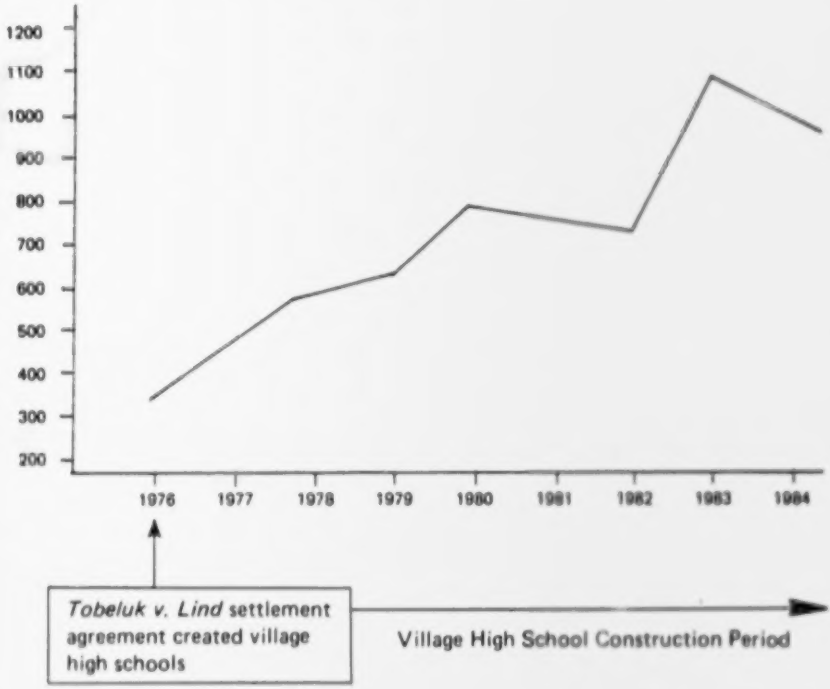
[4]Part III discusses in much more detail the effects of village high schools in reducing student drop-out.

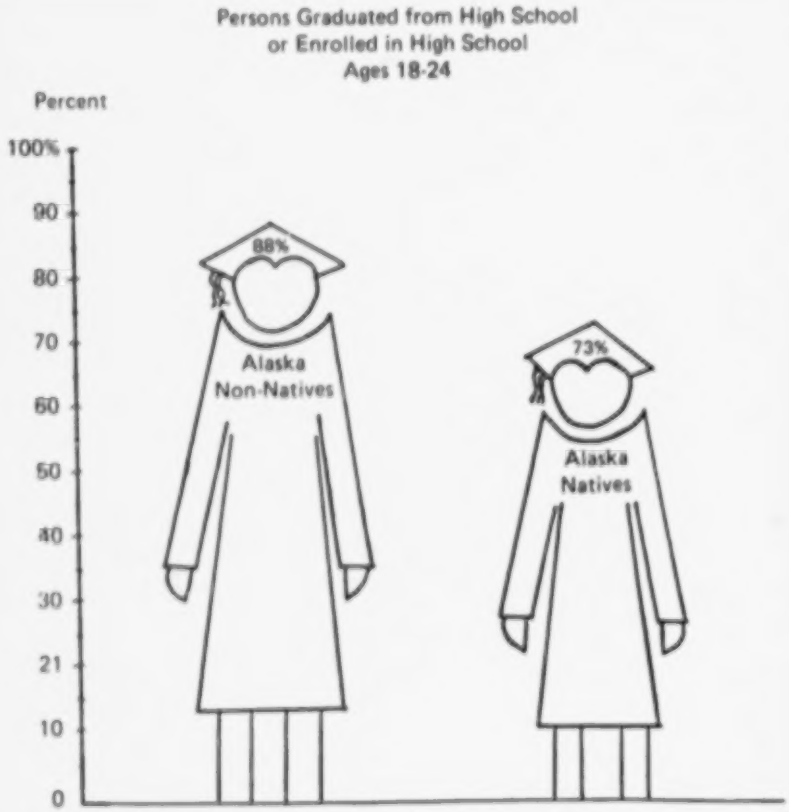


*This increase results from (1) very low drop-out rates in rural high schools, and (2) increased enrollment in rural high schools, rather than urban boarding programs away from home.

Source: Alaska Department of Education, 1984.

Figure 4

Village High Schools Have Increased the Number of Rural High School Graduates*



Source: 1980 U.S. Census of Population. Special run by the University of Alaska, Institute of Social and Economic Research.

Figure 5

The Gap Between Alaska Natives and Non-Natives in High School Graduation Rates is Now Narrow

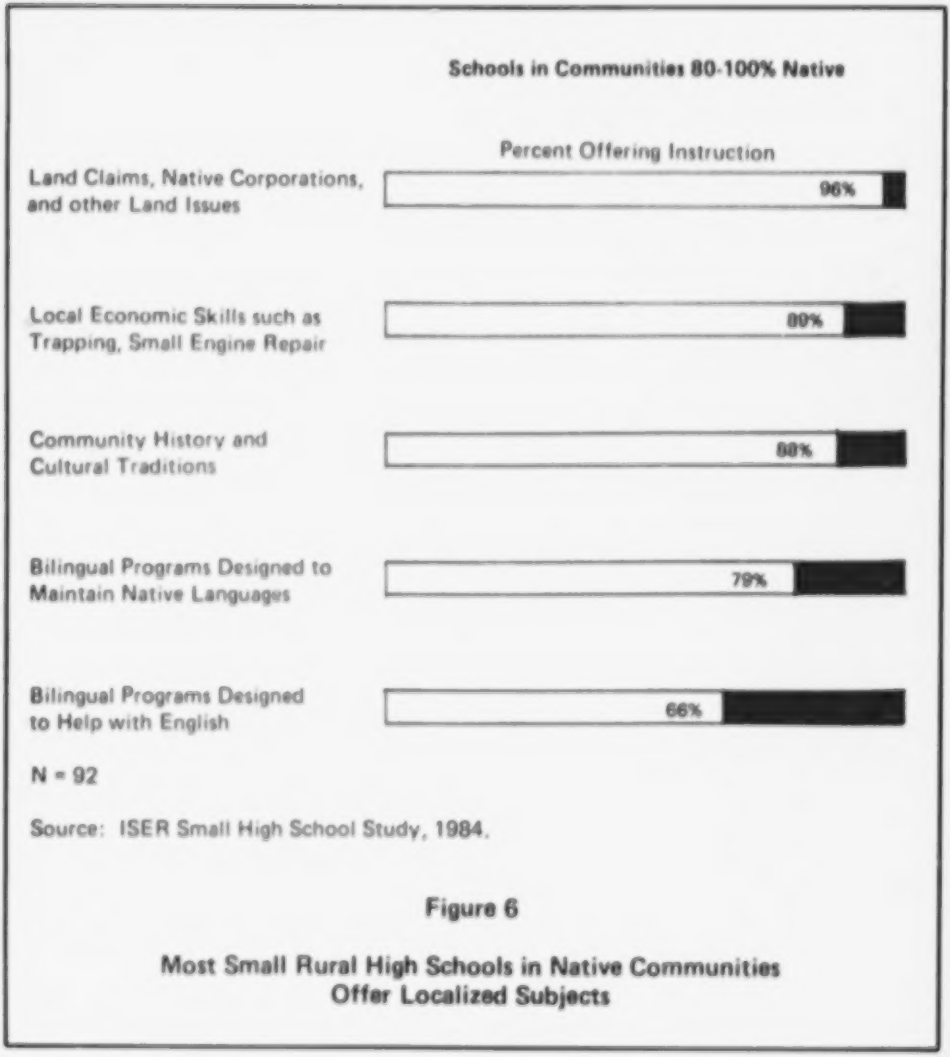

Schools in Communities 80-100% Native
Percent Offering Instruction
Land Claims, Native Corporations, and other Land Issues
96%
Local Economic Skills such as Trapping, Small Engine Repair
80%
Community History and Cultural Traditions
80%
Bilingual Programs Designed to Maintain Native Languages
79%
Bilingual Programs Designed to Help with English
66%
N = 92
Source: ISER Small High School Study, 1984.

Figure 6

Most Small Rural High Schools in Native Communities Offer Localized Subjects

7. Small high schools provide community services, increase employment, contribute to community spirit, and stabilize or increase village population.

Small high schools typically add new facilities to rural communities such as gymnasiums and shops. They furnish spectator sports, community education programs, newspapers, and even radio and television coverage of local events. They offer courses for community members in such areas as completing bureaucratic paperwork, creating graphics, and operating computers. In Table 2, we present statistics on the proportion of rural communities receiving new facilities and services through their high school. In Exhibit B, we illustrate these community effects by presenting one small high school's community activity schedule for the month of November.

Table 2

Small High Schools Add Many Recreational, Educational, and Other Services to Rural Communities

Services	Percentage of Communities Receiving New Facility/Services Through Small High School
Gym or pool	85%
Classrooms for community education, libraries	82
Basketball games/other spectator sports	82
Place for community meetings	79
School newspaper, radio, TV program	63
Movies, roller skating, other recreation	62
Homework assistance after school	58
Shower, bathing facilities	56
Engine/appliance repair shop	32
Cafeteria, snack bar	30

N = 147

Source: ISER Small High School Study, 1984.

Exhibit B

Community Activities One Small High School Provided During the Month of November

November 1-30

Monday	Tuesday	Wednesday	Thursday	Friday
Men's Basketball 7:00–8:00	K–6, Open Gym 7:00–8:00	Women's Basketball 7:00–8:00	K–6, Open Gym 7:00–8:00	Roller Skating K–12, 7:00–8:00 Adults, 8:00–8:00
Women's Basketball 8:00–9:00	7–12, Open Gym 8:00–9:00	Men's Basketball 8:00–9:00	7–12, Open Gym 8:00–9:00	8th Grade Dance November 10
Weight Lifting 7:00–8:30 Jr. High – Sr. High and adults	Weight Lifting 7:00–8:30 Jr. High – Sr. High and Adults	Weight Lifting 7:00–8:30 Jr. High – Sr. High and Adults	Weight Lifting 7:00–8:30 Jr. High – Sr. High and Adults	Band Dance November 18
Basket Weaving Elem Students 7:00–8:30	Aerobic Dance 7:00–8:30 Jr. High – Sr. High and Ladies	Skin Sewing 5:00–7:00 Adult Ladies	Aerobic Dance 7:00–8:30 Jr. High – Sr. High and Ladies	
Skin Sewing Jr. High – Sr. High 5:30–7:00		Basket Weaving Elem. Students 7:00–8:30		
Aerobics for Kids 4:00–5:00 Grades 1–6		Senior Dance November 21		

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Small high schools also increase local employment. Our surveys show that, on the average, each small rural high school employs three community members. The schools also generate rural employment indirectly through such activity as school construction, local travel, and fuel purchases.

This increased employment has stabilized or increased population in Alaska's small rural villages. Indeed, Kruse has found that villages which chose to have high schools have grown in size, while others have not. [5]

Finally, community members emphasize the unity and excitement generated by the local high school. High school activities bring people together to watch the basketball game or the wrestling match, to raise money to send another student to Close-up, or to send the basketball team on a trip. The high school is a center of community life.

Finding No. 4: Rural residents and rural educators are well aware of the disadvantages of small high schools.

In a later section of this report we describe in more detail the educational problems of small rural high schools and how schools are coping with these problems. Below, we briefly summarize the major disadvantages frequently mentioned by community people, school board presidents, and principals.

1. Small high schools offer a limited curriculum with few advanced or specialized courses.

While small high schools can provide a basic academic program, they are not well suited to providing specialized courses—in particular, advanced courses for upper grade levels. [6] School board presidents said that most of the complaints they heard from local

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[5]John A. Kruse, Institute of Social and Economic Research, University of Alaska, unpublished material.

[6]Appendix I presents statistical information on the specialized and advanced courses that small high schools offer.

people about the small high schools concerned the need for more courses—art; music; bilingual education; foreign languages; and, especially, vocational education.

2. Small high schools offer limited extracurricular activities and recreational facilities, such as full-size gymnasiums or swimming pools.

School board presidents said that they receive many requests for improvements in non-academic areas—a larger gymnasium, a swimming pool, more travel, a more varied sports program, and greater community access to the gymnasium.[7] Rural students also emphasized the need for better facilities and more activities, especially, more sports (Tables 3-5).

3. Small high schools have few teachers, and many of these teachers instruct in subjects outside their specialty.

In many small schools the instructional program, administrative work, building maintenance, and extracurricular program all fall on a very small staff. Even though an individual teacher may have few students, that teacher may be responsible for planning and instructing every subject to students throughout the secondary school grades. Teachers must frequently teach classes for which they have little or no academic preparation and in which they have little interest. Almost half of rural teachers, their principals report, teach outside their field of specialization.[8]

4. Small high schools don't provide enough exposure to the world outside the village.

Many principals worry about the social isolation students experience in remote villages. They wonder if rural students will be prepared to make informed choices about what they would like to do as adults. Isolation is not, however, a problem in all villages. Students in some small communities are quite cosmopolitan and frequently travel to cities in the lower forty-eight and, occasionally, abroad.

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[7]For statistical information on high school facilities, see Appendix I, Table A-10.

[8]For related statistical information, see Part IV, Table 12.

Table 3

Student Attitudes Toward Small High Schools

Students Say Good Activities and Good Teachers are the Strong Points of Small High Schools

Strong Points	Percent
Good activities and sports	45
Good teachers	29
Other	14
No advantage mentioned	4

Students Say Not Enough Activities, Teachers, and Courses are Weak Points of Small High Schools

Weak Points	Percent
Too few activities and sports	10
Too few teachers and courses	7
Other	14
No disadvantage mentioned	13

Students Want More Challenge, Better Facilities, and More Activities

Improvements	Percent
Higher standards, more challenge, homework	29%
Better facilities and equipment	23
More activities and sports	18
More course offerings	17
Other	10
No improvements suggested	13

N = 460

Note: Proportions do not add up to 100 percent since some students' answers were not relevant to the question and some students gave more than one answer.

Source: ISER Small High School Study, 1984.

Summary: Rural Residents and Rural Educators See Both the Advantages and Disadvantages of the Small High Schools

Most rural residents and rural educators are well aware of both the advantages and the disadvantages of small high schools. In Tables 4 and 5 we summarize the principals' views—where our information covers virtually all rural high schools.

Despite the problems, most of the community people, school board presidents, and high school principals that we interviewed feel that the small high school should remain the backbone of the rural secondary school system.

At the same time, they also see the need for options. The small high school does not serve every student well.

Table 4

Principals See Major Advantages to Small Community High Schools

Advantages	Yes
Community pride in the school	96%
Parents aware of students' problems	94
Students not homesick	93
Low student/teacher ratio	92
Comfortable student/teacher social relations	91
More community activities	86
Opportunity for individual instruction	84
Students can learn about culture & community	84
Better parental control over students	82
Low drop-out rate*	81
Athletic program	69
Quality of education*	60

N = 140

*A sizable group of principals said they were "unsure" because they lacked comparative information (quality of education: 18 percent unsure; low dropout rate: 11 percent unsure).

Source: ISER Small High School Study, 1984.

Table 5

Principals See Important Disadvantages to Small Community High Schools

Disadvantages	Yes
Limited occupational opportunities in community	77%
Teachers teaching outside their specialization	60
Narrow range of subjects offered	59
Lack of academic competition	58
Social isolation	57
Few teachers	51
Lack of extracurricular activities	50
Teacher's isolation from developments in their fields	34
Quality of education	33
Student social problems	20

N = 140

Source: ISER Small High School Study, 1984.

Finding No. 5: Most rural residents and rural educators think students should have a boarding option.

When we began this study, we thought that people would take one of two opposing positions. Either they would support the village high school or, after experience with these small schools, they would advocate returning to a boarding school system. That is, we expected attitudes toward the village high schools and boarding schools would be "bipolar." If someone preferred the village high school, then he or she would be against boarding schools. If, on the other hand, someone preferred the boarding school, then he or she would be against village high schools.

That is not what we found. The majority of community people and principals we interviewed support village high schools, but they also feel that rural students should have the option of

attending a boarding program (Figures 2 and 3).

Most of the community people and rural principals we interviewed feel that the majority of rural students are better off in a small local school. These schools do not, however, meet the needs of all the students.

Students Who Need or Want an Alternative to the Small High School

Our informants mentioned two kinds of students who need an option to the small local school: students having family problems and students who are academically advanced. During our fieldwork, we encountered another kind of student who wants an option—students who are bored with the limited activities and social life afforded by the local school.

Below, we present our findings about each kind of student who needs or wants an alternative to the small high school.

1. Social Referrals

These students have family problems or other difficulties in the community which make it advantageous for them to go away for high school. For example, in our fieldwork we came across two instances of young women who had been raped and did not want to stay in their home communities for high school. In other cases, severe problems in a family made it desirable for students to go to school elsewhere.

2. Academically Advanced Students.

These students are achieving at a high level. Some are gifted. Others are students whose families have moved back to a small village from a more cosmopolitan area. For these students, the small high school does not offer the advanced courses or the academic challenges they need.

3. Students Who Want More Activities and Social Life

Typically, these are boys who want to play basketball or girls who want more social activities. Parents do not always support their children's desires to go to school elsewhere for these reasons.

Exhibit C

Examples of Community Support for a Boarding School Option

Native Resident

"I think they should be given a choice between a village high school and . . . I don't know what the other choice should be. But I'd say give him a choice.

You know, in every village you have someone that's gonna stick in that village all their life. You know, they're kind of homebodies. They don't travel too far away from their home boundaries.

Then we have other people who are just going to go out there and venture and do things. I think we should give that person an opportunity to better enrich his life . . ."

Non-Native Resident

"The opportunity should be there and the choice should be kept open for the student and the parent, as to which of the two options they would like to have their students go to. Then weighing their own particular needs, to be able to choose between the two of them.

Personally, myself, with my daughter, I want her to go on to college and I feel that with the teaching staff that we have, she can be well prepared for college coming out of the small school here."

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Summary: People Want Options Because a Healthy Educational System Offers Alternatives

To conclude, most community people want an option to the village high school but not because they are necessarily unhappy with local schools. Rather, they feel that a healthy educational system offers students and their parents choices. Whether or not they personally want to take advantage of such an option for their own children, an option should be available for other people's children.

Parents aren't alone in this attitude. Principals agree: Students should have an alternative to the village high school.

Finding No. 6: Some rural families make private arrangements to send their children to high school outside the community.

Many parents we interviewed had attended a boarding school when boarding school was the only option available to those who wanted to go to high school. While some do not want their own children to have a boarding school experience, others do. These latter parents worry that small schools do not offer a quality education. They feel that their children should experience the emotional independence necessary to live away from home and the responsibility of school chores. A boarding school had been good for them, and they want the experience for their own children.

Sometimes these parents arrange for their children to stay with relatives or friends while they attend a public high school away from home. Other parents send their children to private religious boarding schools. It is difficult to estimate how many rural students had chosen to attend high school outside the community because of limitations in the local high school. Most principals (80 percent) said that they knew of no local students attending high school elsewhere for educational reasons. In the other 20 percent of the communities, principals said that a few students were going to school elsewhere.

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In short, even when no public boarding option was available, many village families made their own arrangements to send children away to school. A few rural school districts also provide an in-district boarding option for students from small communities or for students with difficult family situations.

Finding No. 7: Opinions are divided on whether or not the state of Alaska should reopen Mt. Edgecumbe as a statewide boarding school.

Mt. Edgecumbe (which the state decided to reopen in 1985) would offer yet another option to rural students: a statewide public boarding school where students throughout the state would be educated at public expense.

Whether or not the state should reopen Mt. Edgecumbe has provoked considerable controversy. Advocates of reopening the school stress its historical significance in Native education and politics. Mt. Edgecumbe graduates particularly contrast the productive lives of many of their classmates with the inactivity of many in the present generation of high school graduates. They feel that Mt. Edgecumbe gave them a broad education, helped them develop emotional independence, and opened their eyes to the world outside the village. They feel the current generation of village students should have similar opportunities.

Opponents of Mt. Edgecumbe argue that reopening the school will be extremely expensive. The current estimate of annual operating costs is $3.8 million for 175 boarding students. Opponents contend that, at a time when oil revenues are declining and state funds are shrinking, such an outlay of state funds is not wise. The monies could be better used to strengthen the existing small high schools.

Opponents further argue that opening Mt. Edgecumbe will weaken the small high schools educationally. Given the current funding formula for the state foundation program and for federal programs, the loss of two or three students could result in financial losses equal to a teaching position for some districts. Of equal concern is the likelihood that Mt. Edgecumbe would drain off

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talented students. The practical effect of the boarding school, according to opponents, might be to create a "two-track" system in Native schooling.

The opinions of every group we interviewed are divided as to whether the state should reopen Mt. Edgecumbe (Figure 7).

- Principals of small high schools virtually split down the middle on this issue. They give almost equal weight to reasons for opening the school or keeping it closed. Similarly, about half the principals think reopening Mt. Edgecumbe would have virtually no effect on their enrollment, while the other half think a few students would choose to leave (Table 6).

- Presidents of rural school boards typically oppose the reopening of Mt. Edgecumbe, but a minority strongly supports it. Slightly over half (52 percent) of the rural board presidents do support a regional (not statewide) boarding option.

- Community people generally want a boarding school option but there is no consensus that Mt. Edgecumbe should be that option. Almost half would like to have a boarding option closer to home within the school district or region. Many who want the state to reopen Mt. Edgecumbe live in Southeast Alaska, close to Sitka. For them, Mt. Edgecumbe would be close to home.

Mt. Edgecumbe Graduates Differed Widely in Achievement During Its "Selective" Era and Its "Open Admissions" Era

A crucial educational question is: Would the students who left the small high schools to attend Mt. Edgecumbe experience the high quality education that the school's alumni remember? Or was the high quality education that alumni remember the result of special historical circumstances—a time when few village students left home for high school, and the few who did leave had unusual academic talent?

One way to address this question is to compare achievement test scores and drop-out records from two different eras in Mt.

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Exhibit D

Examples of Views on Re-opening Mt. Edgecumbe

Community Member: Negative View

As far as Mt. Edgecumbe is concerned, I feel it would be a good thing if it was a vocational training school. But the state has spent millions and millions of dollars to go in and build beautiful high schools for students to attend. And then they go to these small villages, pick up these students, and take them away to a boarding school. Well, this defeats the purpose in the very beginning!

Village High School Principal: Positive View

The students here are at somewhat of a disadvantage. Of the 30 seniors here, two could have used a boarding school. If the student has the recommendation of the teachers and principal to go to the school, I think that it is the state's duty to provide equal opportunity to all the students.

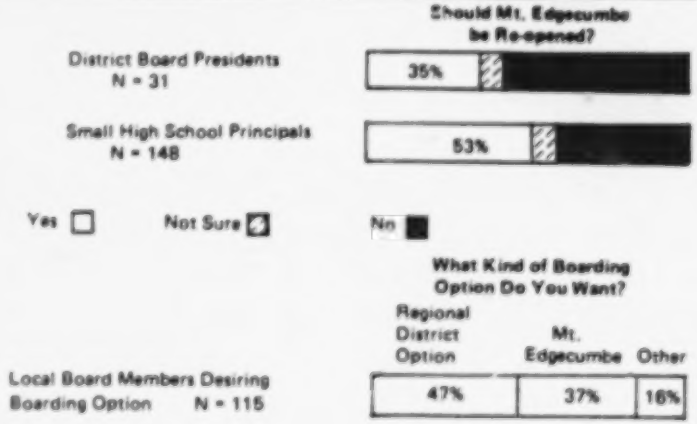

Figure 7

Rural Residents and Rural Educators are Divided on Re-opening Mt. Edgecumbe

Source ISER Small High School Study, 1984

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Table 6

Possible Reasons for Re-opening or Closing Mt. Edgecumbe: Principals' Views

Reasons to Re-Open	Percentage Agreeing
Need an alternative to local high schools	60%
Local schools too limited academically	42
Local schools too limited socially	51
Local schools too limited in extracurriculars	43
Students need exposure to life outside village	55

Reasons to Close	Percentage Agreeing
Too expensive/would drain off funds needed for local schools	67%
Would drain off talented students from local schools	48
Would draw students away from their community & culture	61
Too many social & emotional problems at boarding schools	52

N = 136

Source: ISER Small High School Study, 1984.

Edgecumbe's history. In one period, Mt. Edgecumbe was selective; in the other, it was not.

The first period takes in the early 1960s, when Mt. Edgecumbe was a highly selective school. Since there were not enough spaces for all the village students who wanted to attend high school, Mt. Edgecumbe could select the most academically promising students. Students who attended Mt. Edgecumbe during this period rarely traveled home. Most students could not afford to return home even for Christmas.

Table 7

Opening Mt. Edgecumbe Will Have Minor Effects on Small High School Enrollment in Most Principals' Views

Effects of Opening Mt. Edgecumbe on Small H.S. Enrollment	High School Size				
	10 or less	11-20	21-40	41-100	Total
No Effect	58%	45%	35%	33%	45%
Slight Decline	36	55	60	50	49
Substantial Decline	6	–	5	17	6
Number of Principals	36	29	40	18	123

Source: ISER Small High School Study, 1984.

The second period occurred in the mid-1970s. At this time, students had several boarding alternatives. Most village students left home to attend high school. Mt. Edgecumbe no longer pulled out the brightest ninth graders. Nor did it enjoy the prestige of the early 1960s. Indeed, some students worried that, by attending a segregated Bureau of Indian Affairs boarding school, they were receiving a lower-quality education than rural students attending urban high schools through the boarding home program. During this period, students at Mt. Edgecumbe returned home for vacations and family emergencies. They were no longer so isolated from their homes.

Educational outcomes at Mt. Edgecumbe were radically different in the selective 1960s era and the open admissions 1970s era (Table 8). In 1963, seniors graduated with test scores *almost at grade level.* These students had, however, entered almost at grade level four years earlier.

In 1974, seniors graduated with test scores *below the ninth grade level.* But, as ninth graders, these students had started their high school education with test scores at the sixth grade level.

Similarly, the drop-out rates were extremely low (2 percent)

in the selective period. In the open admissions period, drop-out rates and the incidence of social problems climbed.

In short, selective admissions—not just the boarding school experience—probably accounted in part for the high level of educational achievement of the Mt. Edgecumbe graduates in the 1960s. Although there is no reason to believe that the quality of instruction fell off, similar achievement results did not occur at Mt. Edgecumbe in the 1970s, when the school was less selective.

When Mt. Edgecumbe Reopened in 1985, About Four Percent of Village High School Students Applied for Admission

The Alaska Board of Education decided to reopen Mt. Edgecumbe as a ninth-through-twelfth-grade statewide boarding school in 1985. By July 1985, Mt. Edgecumbe had received slightly under 200 student applications. Over 20 percent of these applications came from students in urban areas or regional centers who had a high school of more than 100 students available locally.

Table 8

Mt. Edgecumbe Achievement Test Scores were Much Higher in its Selective Era Compared to its Open Admissions Era

	Selective Era 1963	Open Admissions Era 1974
Achievement Test Scores		
Grade 12	11.2 grade level	8.9 grade level
Grade 9	8.2 grade level	6.5 grade level
Drop-Out Rates	2%	20%
Percentage of Students in Anti-Social Incidents	2%	18%

Source: Mt. Edgecumbe records.

A few other applications came from isolated correspondence study students or from students in rural communities without full high school programs. Less than 4 percent of students who had local ninth-through-twelfth-grade programs available applied to Mt. Edgecumbe. We do not know to what extent this low application rate is due to the fact that rural students were not aware of the Mt. Edgecumbe option. The boarding school, however, has room for only a fraction of village students. *The majority of students, it is clear, will remain in village high schools.*

Summary: People Disagree About Alternatives to Small Local High Schools

In short, most people want an alternative to small local high schools. Opinions differ, however, on what that educational alternative should be—a statewide boarding school, an in-district boarding option, or private family arrangements.

Opening Mt. Edgecumbe as a state-run boarding school, as the state will do in 1985, will provide a public alternative. At the same time, a revived Mt. Edgecumbe seems unlikely to recapture the accomplishments of the school during its selective period.

Conclusion

After five or more years of experience with small local high schools, most people believe that the local schools should remain the backbone of Alaska's rural secondary system. Community school committee members, the rural school board presidents, and principals agree: Small high schools constitute good educational policy.

Small high schools, despite their educational limitations, have crucial advantages. Most importantly, young people can stay with their families while they attend high school. Communities that want to maintain their language and use formal schooling to transmit their own cultural heritage can do so. Community members have greater control over the schools their children attend, both formally and informally. The small high schools provide

much-needed services, recreation, and employment in rural communities.

At the same time, people are cognizant of the shortcomings of small high schools: few advanced or specialized courses; limited extracurriculars; lack of variety in teachers, courses, and peers; and little direct experience in the wider world. Offsetting these limitations are significant educational advantages: very small class size, one-on-one instruction, highly personalized teacher-student relations, ready access to microcomputers and travel programs, and the chance not only to participate but to be important.

While small high schools serve many students well, they are not the best educational alternative for all students. Most community school committee members and small high school principals agree that students who want to go away to a boarding school should be able to do so.

Three groups of students need or want an alternative to the small high school: students with family problems, academically advanced students, and students who want more activities and social life. Currently, some school districts and rural families make arrangements to send these students to schools outside their communities.

Whether a statewide boarding school, such as Mt. Edgecumbe, is needed to supplement these existing arrangements remains a matter of intense debate. The loss of state funds due to the departure of some students might seriously hinder the ability of some small schools to employ the staff they need.

Whether or not to reopen a boarding school is not the question of greatest moment to rural education. Regardless of the presence of a statewide boarding school, most rural students will remain in small high schools. The key question is: How can we make these small high schools work? How can we take advantage of the opportunities these schools offerand, at the same time overcome their limitations?

Fortunately, there are small rural high schools that have devised their own answers to these questions. In the following section, we will take a look at what these schools are doing.

Summary of Findings: Part III

1. Small high schools have substantially increased high school graduation rates among rural students.

2. Recent research at the national level questions the quality of education available at large high schools.

3. Recent research at the national level demonstrates the value of instructional methods suited to small high schools—tutorials, cross-age peer tutoring, and computer-assisted instruction.

4. Students in very small rural high schools do not have lower achievement test scores than students in larger rural high schools.

5. Some small high schools are offering a high quality education adapted to local circumstances and priorities.

6. Some small high schools have developed a negative school culture marked by community-school hostility and classroom apathy.

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PART III:
Some Small High Schools Are Working . . . and Some Are Not

Introduction

Below we examine findings—both our own and other researchers'—supporting the view that not only can small high schools work but they may actually have a number of advantages over large schools.

Presentation of Findings

Finding No. 1: Small high schools have substantially increased high school graduation rates among rural students.

The increase in the number of rural students who now graduate from high school is the most dramatic achievement of the small high schools (Part II, Figure 4). The significance of reducing the drop-out rate to about 12 percent shows up best against the backdrop of rates in school settings: Nationally, the number of students dropping out is roughly 25 percent, while in urban areas between 50 and 60 percent of minority children drop out before graduating from high school (Table 9). In Anchorage, nearly 50

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Table 9

Drop-Out Rates are Very Low for Students from Small High Schools

Amount of Drop-out	Proportion of Schools in this Category
Very low (less than 10%)	67%
Low (10-19%)	18
Average (20-29%)	6
High (30% or more)	9
Total	100%

Number of Reporting Schools = 126

Source: ISER Small High School Study, 1984.

percent of Native students drop out or "disappear" before they graduate.[1]

High graduation rates influence the achievement levels of subsequent generations of students. Rural school board presidents and educators report that residents who are high school graduates are more knowledgeable about the schools, more involved in shaping the educational program, and more likely to help their children. Not surprisingly, we found that the higher the community educational level, the higher students' achievement test scores (Table 10).

Critics of the small high schools tend to downplay the significance of the increased graduation rates. They claim that this measure of alleged success—the quantity of schooling—says no-

[1]Frederick P. Stoffiet, Ray Fenton, Thomas Straugh, and Judith Ware, *Anchorage School District 1984-85: Profile of Performance* (Anchorage: Anchorage School District, March 1985), pp. 150, 157.

thing about the quality of schooling. Such criticism ignores the profound effects of the quantity of schooling on values, attitudes, and behavior. Inkeles and Smith in their study of modernization in six developing countries found that schooling "was by far the single most important determinant of a man's modernity":[2]

> Those who had been in school longer were not only better informed and verbally more fluent. They had a different sense of time, and a stronger sense of personal and social efficacy; participated more actively in communal affairs; were more open to new ideas, new experiences, and new people; interacted differently with others; and showed more concern for subordinates and minorities.[3]

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[2]Alex Inkeles and David H. Smith, *Becoming Modern: Individual Change in Six Developing Countries* (Cambridge: Harvard University Press, 1974), p. 284.

[3]*Ibid.*, p. 143.

Table 10

Rural Students Score Higher on Standardized Achievement Tests in Those Rural Communities Where Half or More Adults are High School Graduates

National Percentile Range	Communities Where Less Than Half the Adults are High School Graduates	Communities Where More Than Half the Adults are High School Graduates
0 - 20th	55%	26%
21 - 40th	29	33
41 - 60th	11	27
61 - 100th	5	14
Totals	100%	100%
r = .29	N = 305	n = 134

Note: These figures represent average achievement test scores for a whole class rather than individual students.

Source: ISER Small High School Study, 1984.

Whether we consider such individual changes as progress or decline, the power of the hidden curriculum is undeniable. The longer students are exposed to these implicit forces, the more their values, attitudes, and behaviors are affected.

Finding No. 2: Recent research at the national level questions the quality of education available at large schools.

Big School, Small School: Issues of Quality

Recently, research on instructional practice and national reports on the quality of education have called into question the effectiveness of the comprehensive high schools. Our own research—particularly our visits to some thirty-two small high schools in rural Alaska— suggests that small size is not necessarily a disadvantage. Indeed, the success of small secondary programs depends largely on whether or not educators and local residents take advantage of their smallness and their situation.

After World War II, school districts throughout the country, intent on being modern and up-to-date, enshrined their newly consolidated secondary programs in the imposing brick-and-mortar of comprehensive high schools. James Conant and others touted these schools as the most effective and efficient organization for delivering secondary instruction.[4] Small high schools were viewed as a relic of a bygone era in American education, a quaint reminder of our agrarian past like the mule and plow.

Falling test scores, declining standards, the inadequacy and inappropriateness of the curriculum, high rates of absenteeism, and in-school violence are some of the conditions that have recently led a number of researchers to re-examine the effectiveness of the comprehensive high school.[5]

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[4]James Conant, *The American High School Today* (New York: McGraw-Hill, 1959).

[5]Ernest Boyer, *High School: A Report on Secondary Education in America*

(Footnote 5 continued on page 51)

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Compromising with Mediocrity

Ted Sizer's story of Horace Smith—an "Everyteacher" character—illustrates the dilemma that many teachers face in large comprehensive urban and suburban high schools.[6] Horace is a true professional. He knows how and what to teach. To teach writing properly, he knows he should read carefully each of his 130 students' essays and respond with thoughtful marginal comments. To do this, Horace would need to spend 15 minutes per paper—or nearly 33 hours for a set of papers.

So he spends 5 minutes per paper—an insufficient time to get the job done as he knows it should be done. This is Horace's compromise—with mediocrity. As it is, he still spends nearly 11 hours a week correcting papers in addition to preparation, instruction, administrative trivia, and extracurricular supervision.

In rural Alaska, we found that teachers in multigrade classrooms may have 12, 14, even 16 or more preparations. While their work load is no less than that of their urban and suburban counterparts, rural teachers enjoy relatively low teacher-student ratios. Professionals such as Horace, who know what and how to teach, can devote more time to each individual student for the simple reason that there are fewer students.

The "Shopping Mall High School"

The ability to offer a diversified curriculum with something for every taste—a strong selling point of the comprehensive high schools from Conant's time to the present—is also being reexamined. In *The Shopping Mall High School*, Arthur Powell,

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5 *(Continued from page 50)*
(New York: Harper and Row, 1983); Theodore Sizer, *Horace's Compromise: The Dilemma of the American High School* (Boston: Houghton Mifflin, 1984); Arthur Powell, Eleanor Farrar, and David K. Cohen, *The Shopping Mall High School* (Boston: Houghton Mifflin, 1985); National Commission on Education, *A Nation at Risk: The Imperative for Educational Reform* (Washington, D.C.: U.S. Department of Education, 1983); and John I. Goodlad, *A Place Called School: Prospects for the Future* (New York: McGraw-Hill, 1983).

6 Sizer, *Horace's Compromise: The Dilemma of the American High School.*

Eleanor Farrar, and David Cohen argue that curricular choice for students has been overdone—and oversold.[7] Students who need the fundamental skills necessary to communicate effectively and clearly and to find essential information often slide through high school, taking a succession of courses of marginal educational value.

The Education Commission for the States has called for the elimination of "soft," nonessential courses, and some critics have urged that differentiation between college-bound students and others be ended.[8]

Small high schools in rural Alaska are like Ralph's Pretty-Good Grocery in Garrison Keillor's imaginary Lake Woebegon: If you can't get it at Ralph's, you can probably do without it.[9] The small staffs in these schools labor to ensure that all students meet the graduation requirements of the state. Teachers often teach two or three different core courses in multigrade classrooms. There is simply neither the time nor the place in the curriculum for non-essential courses.

Student Participation and Flexibility for Professionals

In his critique of the American secondary school, Ernest Boyer points out the advantages that small schools have over large comprehensive schools in providing opportunities for students to participate in a wide range of activities—from student government and clubs to athletics and community service projects.[10]

Boyer's observations reiterate a point made two decades ago by Barker and Gump in their study *Big School, Small School*.[11] In discussing the forces acting on students to participate in school

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[7]Powell, et al., *The Shopping Mall High School.*

[8]Mortimer Adler, *The Paideia Proposal* (New York: McMillan, 1982); and Goodlad, *A Place Called School* . . . .

[9]Garrison Keillor, "Prairie Home Companion," a weekly show on National Public Radio, originating from Minneapolis, Minnesota.

[10]Boyer, *High School: A Report on Secondary Education in America.*

[11]R.G. Barker and P.V. Gump, *Big School, Small School* (Stanford: Stanford University Press, 1964).

activities in large and small schools, the authors note that students in small schools reported experiencing many more forces than did students in large schools. Moreover, marginal students in large schools experienced very few forces toward participation while marginal students in small schools experienced as many forces toward participation as did regular students.

Summary: Large Schools are not Living up to Their Billing

In sum, while small high schools cannot offer the curricular diversity available in large high schools, the educative value of such diversity is open to debate. In addition, the sheer numbers of students and the many demands on teachers' time in large schools mean that many professionals must compromise with mediocrity just to get the job done.

On the other hand, the small high school offers a core curriculum in which teachers can devote a lot of individual attention to students (the importance of which we will examine more closely below), a school culture that favors student participation, essential emotional support, and flexibility in scheduling to allow principals to fit the time to the task.

Finding No. 3: Recent research at the national level demonstrates the value of instructional methods suited to small high schools—tutorials, cross-age peer tutoring, and computer-assisted instruction.

Instruction in Small Schools

Tutorial Instruction in Small High Schools

Benjamin Bloom and his associates at the University of Chicago recently published the results from several integrated studies of different instructional approaches. Their findings are of great importance, particularly to small schools.[12]

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[12]Benjamin Bloom, "The 2 Sigma Problem: the Search for One-to-One Tutoring," *Educational Research*, June/July 1984.

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Bloom and his colleagues found that tutorial teaching—one-to-one, one-to-two, or one-to-three—is more effective than either conventional whole class instruction or whole class instruction using a Mastery Learning approach.[13]

Yet the *magnitude* of the difference in effectiveness between these instructional approaches is startling. As Figure 8 illustrates, the mean achievement of students receiving tutorial instruction is two standard deviations greater than that of students in whole group instruction. Using the tutorial approach, almost everybody gets it. Look at the student learning under conventional instruction and under tutorial instruction—the student just at the middle. In fact, *the average student receiving tutorial instruction achieves better than 98 percent of the students who receive whole class instruction.*

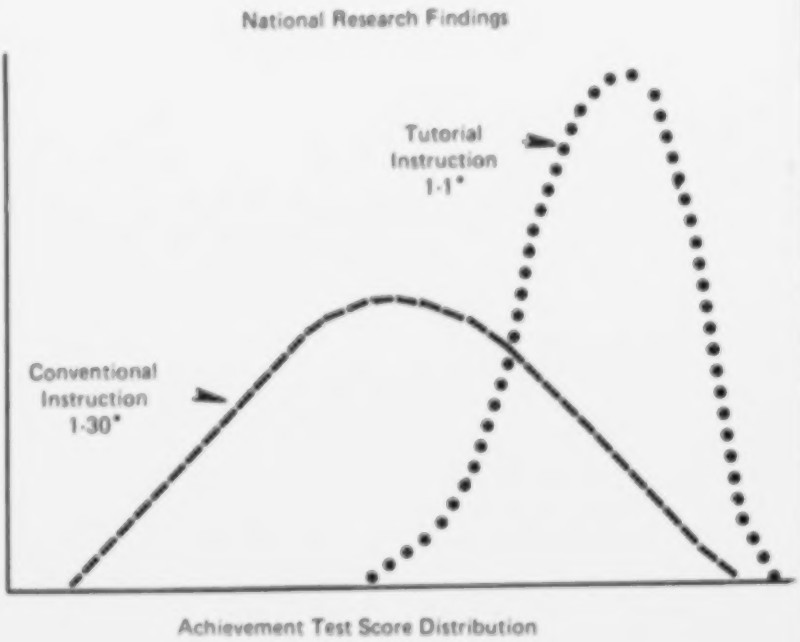
For large comprehensive high schools, these findings constitute the so-called "two-sigma problem" because most of these schools simply do not have the resources to provide intensive tutorial instruction. For educators and parents in these large schools, figuring out how to manipulate instruction and learning to match the achievement possible through tutorial instruction is a problem.

In small high schools, these findings represent an exciting opportunity. In most rural high schools, teachers can structure their classes to take advantage of the tutorial opportunities—and many are doing so. Where this doesn't happen, teachers may be victims of the community's and their own image of what a high school class should look like: a teacher standing in front of a blackboard lecturing to students sitting passively at their desks. In other words, they try to superimpose the image of a comprehensive urban high school on the reality of a twenty-student village school.

Class Size and Achievement

The significance of Bloom's findings is underscored by

[13]Benjamin Bloom, *Human Characteristics and School Learning* (New York: McGraw-Hill, 1976).



*Teacher-student ratio.

Source: "The 2-Sigma Problem: The Search for Methods of Group Instruction as Effective as One-to-One Tutoring," Benjamin S. Bloom, *Educational Researcher*, June/July, 1984, pp. 4-16.

Figure 8

Tutorial Instruction Dramatically Increases Student Achievement

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research on class size. Glass and Smith conducted a meta-analysis of seventy-seven studies of class size and found that students in classes of fifteen or less gained the most on achievement tests.[14]

Filby's research shows that teachers in smaller classes do not necessarily teach any differently than they do in larger classes.[15] Rather, having fewer students means that the teacher has more personal contact with each student. As Filby (1985) has noted:

> There are predictable differences in class processes that follow simply from the numbers: lines are shorter; students are more visible; each student is more likely to get a turn more often during the lessons; students don't have to wait as long for help. These changes, in turn, mean higher student attention, fewer discipline problems, and improved attitudes among teachers and students toward their experiences in the classroom . . . .[16]

Cross-age Peer Tutoring and Computer-Assisted Instruction

Henry Levin and his associates at Stanford recently compared the cost-effectiveness of four types of supplemental instruction—adult tutoring, cross-age peer tutoring, extending the school day, and computer-assisted instruction.[17]

Levin's findings corroborated those of Bloom: Adult tutoring proved to be the most effective instructional approach. Cross-age peer tutoring was, however, clearly the most cost-effective.

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[14]Gene V. Glass and Mary L. Smith, *Meta-Analysis of Research on the Relationship of Class Size and Achievement* (San Francisco: Far West Laboratory for Educational Research and Development, September 1978).

[15]Nikola N. Filby, "Evidence of Class-Size Effect," Paper prepared for the American Association of School Administrators, Anaheim, Calif., 1980.

[16]Nikola N. Filby, personal communication, in Karen Klein, "The Research on Class Size," *Phi Delta Kappan*, April 1985.

[17]Henry M. Levin, Gene V. Glass, and Gail R. Meister, *Cost-Effectiveness of Four Educational Interventions*, Project Report No. 84-A11 (Stanford: Stanford University, 1984).

Peer tutoring is a natural for the multigrade classrooms typical of small secondary schools. We found a number of classrooms in which peer tutoring was already being used. Indeed, this approach has a history as long as that of the harvest-time vacation in rural American schools.[18]

The second most cost-effective approach to supplement instruction, according to the research of Levin and his associates, is computer-assisted instruction.[19]

Small high schools in rural Alaska have been in the forefront of the movement to place personal computers in the classroom. Again, because of their smallness, rural high schools offer each individual student greater access to computers than do larger schools. While the Anchorage School District set as a goal for the 1984-85 school year the placing of a computer in every classroom—where there are typically twenty or more students—rural schools may have two or three computers—and often more—for an *entire* student body of twenty.

Summary: Research Findings Favor Instructional Approaches Suited to Small Schools

In short, the tide of research, which has run so strongly in favor of the large comprehensive high school for decades, is turning. Small high schools offer tutorial opportunities that, the research shows, promise remarkable achievement gains. Small classes increase student-teacher contact and favor higher achievement. The most cost-effective approaches to supplementing instruction—peer tutoring and computer-assisted instruction—are perhaps better suited to small rather than large schools. The highly touted choices in courses available in large schools may serve to confuse or sidetrack some students, particularly those who need core English, math, science, and social studies classes.

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[18]Larry Cuban, *How Teachers Taught: Constancy and Change in American Classrooms, 1890-1980* (New York: Longman, 1984).

[19]Henry M. Levin, et al., *Cost Effectiveness . . .* , 1984.

Small schools offer educators some exciting opportunities to make a real difference in students' skills and learning. Whether or not educators seize these opportunities seems to depend largely on their willingness to see their smallness as an advantage and use it. Certainly there are disadvantages to smallness as well—and we will discuss these in the next section. None of these, however, appears to be insurmountable.

Finding No. 4: Students in very small rural high schools do not have lower achievement test scores than students in larger rural high schools.

Pointing to the low achievement test scores from rural Alaska, critics of the small high schools charge that these schools are simply incapable of getting the job done. They are too small to have the specialized staff, diversified curriculum, and competitive academic atmosphere believed necessary for high achievement.

National studies of the relationship between school size and achievement refute this charge. A review of the relevant literature found: Most reliable studies show that size has no independent effect on academic achievement.[20]

In our visits to schools ranging in size from two students up to ninety, we saw small secondary programs just as effective as the larger ones. Our observations are confirmed by achievement test scores. In the larger rural high schools—enrolling forty to 100 students—the distribution of test scores is no different from the distribution of scores in the smaller schools (Table 11).

While the size of rural high schools does not affect student achievement, the educational level of the community definitely does (Table 10). Where a majority of village residents have graduated from high school, achievement test scores are significantly higher than in villages where high school graduates are a minority.

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[20]National Institute of Education, *School Size: a Reassessment of the Small School*, Research Action Brief Number 21 (Washington, D.C.: National Institute of Education, 1982).

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To understand the full implications of this finding, we need to recall that graduation rates have risen dramatically since the small high school programs began. As more and more village residents graduate from high school, we can expect achievement test scores to rise as well.

Table 11

Rural Students in Very Small High Schools Score Just as High on Standardized Achievement Tests as Rural Students in Somewhat Larger High Schools

National Percentile Range	High School Size			
	10 or less	11-20	21-40	41-100
0 - 20th	37%	46%	51%	46%
21 - 40th	24	37	27	38
41 - 60th	17	14	18	10
61 - 100th	22*	3	4	6
Totals	100%	100%	100%	100%
r = –.18	N=100	N=104	N=157	N=78

Note: These figures represent average achievement test scores for a whole class rather than individual students.

*The proportion of classes in the schools with 10 or less students showing very high achievement levels may be misleading since some of these classes have very few students.

Source: ISER Small High School Study, 1984.

Finding No. 5: Some small high schools are offering a high quality education adapted to local circumstances and priorities.

In our visits to the thirty-two schools in our sample, we found some schools that were working extremely well, and others that were not. Where we found genuine learning taking place, the staff was using the advantages offered by small size to tailor an educational program to the needs of the community.

We defined small high schools as "working well" when they exhibited the following characteristics:

- A staff that had adapted the instructional program to local priorities, needs, and conditions.
- High attendance and few dropouts.
- Students who spend most of the school day on demanding academic tasks.
- Community members who express support for the staff and the instructional program and who feel welcome at school.
- Teachers who express enthusiasm for the school and see serious learning taking place.

Below we profile three schools that met these criteria. We do not offer these schools as models of what every high school should be. Other high schools that work just as well look quite different. There are many ways to make small high schools work. Each community must develop a small high school program adapted to its own circumstances and priorities.

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Schools That Are Working[21]

Tundra High School

(Fifteen students—three teachers, two full- and one part-time)

Tundra High school is in a village that has maintained its lifestyle despite the cultural changes that have swept through the state. English is still spoken in only two settings—church and school. The revolving seasons of subsistence continue to dictate the rhythm and pace of daily life. Villagers value this lifestyle very highly, for practical as well as spiritual reasons: There are no local economic alternatives.

When the only option for those who wished to attend high school was to leave the village, few graduated. The pull of family and community was too strong. Those who did leave for distant boarding schools usually dropped out and returned home.

Today, fifteen students attend the local high school. They are taught by three teachers—two full-time and one part-time—and two aides from the community. All but perhaps one or two of these students will graduate. Recently, several have applied for admission to college.

Curricular Emphasis: Language Development

Poor English language skills are the major impediment to academic progress. Faced with this situation, the principal decided to use the students' knowledge of their own language—Yupik—as a bridge to English:

> Being that Yupik is their first language and English is taught as a second language, I try to approach it purely as a language development situation. That approach is based on my six years of experience out here. Every-

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[21]For an excellent case study of a successful village high school, see Barbara Harrison, *Manokotak: A Case Study of Rural Development in Alaska* (Fairbanks: University of Alaska, 1985). This research—done independently of our study—reached similar conclusions about the characteristics of an effective village high school.

> thing is geared toward the teaching of English and the support of Yupik. Even though their oral Yupik is excellent, they cannot read or write Yupik. I'm operating from the belief that if your students have a strong first language, it's easier to teach the second language. So, while we're teaching English, we're also teaching Yupik. All of the classes—whether science, social studies, or whatever—are taught with language in mind.

Subject Matter: The Community

While language development provides an emphasis for the instructional program, it does not dictate specific content. In looking for appropriate subject matter, the staff sought material that would motivate and interest students raised in a unique geographical and cultural environment. The local community and its environs offer a rich variety of subject matter that is—unlike that found in most textbooks written for a national mass market—familiar and immediate.

Of equal importance in deciding to use local subject matter was the strong feelings parents expressed about passing on their way of life to their children. As one parent explained to us through an interpreter:

> When my older children used to go away for high school, they didn't learn to think like an Eskimo. They'd come back to the village and they didn't know what it was to be Eskimo. They didn't fit here. I want my children to stay here, to learn to think and be like an Eskimo.

For example, one project involved students in interviewing members of a construction crew who were building new housing in the village. These interviews and the discussions they provoked led students to interview local elders about what housing had been like before contact with Westerners. This in turn led to a field trip to the remains of a sod house nearby. From materials collected from these sources, the students produced a bilingual newspaper and a video program on housing in the village.

The principal refers to this approach as "a single thread" that

ties the curriculum together. Another project involved a trip to a nearby village for the annual reindeer roundup. This experience also "threaded" through the curriculum:

Subject or Class	Curriculum Thread
Graphics	A photographic essay of the herd and corral
English	Interview essays and personal experiences
Industrial Arts	Building a stretching rack for the hides
Native Arts	Fleshing, cleaning, and tanning hides
Science	Anatomy, feeding habits, and animal functions
Home Economics	Instruction in proper meat cuts, wrapping, and freezing techniques
Mathematics	Determining weights, pricing, cost per pound, and trip cost
Alaskan History	History of reindeer herding in Alaska

This and similar projects develop a number of skills needed for academic success, including listening, speaking, writing, reading, higher order questioning, organizing ideas and activities, and critical judgment. As part of the planning process for projects, the staff matches project activities with instructional objectives to ensure that the school district's goals are met. Despite the emphasis on local subject matter, students cover all the subjects required for high school graduation by the State Board of Education.

As the projects are production oriented, students derive a sense of accomplishment and pride from the products. At the same time, the community can see tangible evidence of student learning.

Scheduling: Fitting Time to Activity

The principal found that a conventional class schedule—seven 50-minute periods per day—did not suit the activities involved in producing the newspaper, videos, and radio programs. So he

A Day in the Life of a Principal-Teacher in a 16-Student Rural High School

"Could you give me some idea of how you spend your day?" I asked him.

"Oh, boy! Well, I'm usually up at 6:00. I get over to the school, and my wife stays at home to get the kids up and going.

We have no washing facilities at the house. I usually get myself cleaned up over at the high school, so I'm on the job at 7:00. I'm usually doing administrative work from 7:00 to 8:00 and class preparation from 8:00 to 9:00.

Classes start at 9:00. Then it's a real *go* period until 3:30. I'm either in the class teaching or off handling a maintenance problem or dealing with an administrative problem.

From 3:30 to 5:00 I'm either helping kids with homework or with a form they have to fill out or just sitting down to chat with them because there's not enough time during the day to get personal. We might talk about a problem because I'm also the counselor.

I usually stop at 5:00 so I can pick up the children, go home, and have dinner. But if I'm behind, then I'm back over at school at 8:00.

My wife writes me notes to communicate. It's been a real strain on the marriage.

And then there are the emergencies. If I go to sleep at night and our electric heater goes off, well, it goes off for one reason: The generator is down. I get up out of bed, I go back to school, I shut down the generator, and I try to bring another generator on line.

If it's a severe problem, then I have to trudge through the storms or whatever to get my maintenance man. We're out there until 2:00 or 3:00 in the morning putting a generator together. Then I go back to bed and get up at 6:00 again.

Then there's Saturday and Sunday—mail and administrative work. That's basically the week. It's a seven-day-a-week job. You start in August and you end in May."

adopted a schedule that features 95-minute blocks devoted to language arts, math, social studies, and science on alternating mornings. On Fridays, the school reverts to a conventional format so that students can be tested—a regular weekly feature of the instructional program.

The afternoon is structured around practical subjects such as child care and subsistence living. The two students in the former class spend several hours each week assisting in the local Head Start program. Class time is spent reading about and discussing theories of child development. Other students learn hunting lore in a bilingual class that is team-taught by the bilingual aide and one of the teachers. Together they prepare for the class, sharing skills and information. The aide learns to develop instructional objectives and lesson plans, and the certified teacher learns the history and culture of the region.

Summary: Using Smallness to Meet Local Needs

At this school, the staff has used its flexibility and relative autonomy to create an instructional program that meets the needs and capitalizes on the opportunities presented by the community. The school's smallness confers flexibility; its remoteness and a sympathetic central office afford relative autonomy. The staff did the rest.

Tundra High reminds one of a progressive private school. In the small classes, teachers push students to draw relationships and to step beyond the immediate to the abstract. At the same time, language development, active learning, and the use of local subject matter are tailored to the needs of students in this particular community. Learning objectives for students include both understanding their heritage and mastering the skills and knowledge required in the world beyond the village. Academic work produces tangible results—newspapers, videos, radio programs—that can be shared with friends, family, and community. Finally, to accommodate these learning activities, the course schedule has been adapted to afford larger blocks of time for projects.

Highlands High School
(9 students, 1 full- and 1 part-time teacher)

Surrounded by mountains, this school sits above a village that is home to 125 people. English is the everyday language. Few of the young people can speak their native tongue. The regional town is close enough that people make the short air hop just to shop.

The educational level of the village is high. Most adults have completed high school. Several graduates of the high school are currently in college, and several others have attended.

Curriculum: College-Prep

The staff and community at our second site made a very different decision about the emphasis at their school. The principal described the process used to reach this decision:

> Because of the small size of our school, we felt that we weren't going to be able to do everything that a large high school is able to do. So we put it to the community: Which of the three areas—college preparation, subsistence skills, or vocational education—do you want the high school to focus on? The majority of the community decided that college preparation was the most important thing for the high school to teach. So we've been trying to develop a strong academic program.

Scheduling: Yearly Course Rotation

With college attendance the goal of the instructional program, the teacher and his wife—who teaches part-time—have created a curriculum in which the course offerings rotate. All the courses required for college cannot be offered every year, but they can be offered at least once during each student's four years at the school.

> We've set up a system of course rotation where every three years we start the sequence of courses over again. So, say, in science we teach biology one year, earth science the next, and physical science the next. Then we start over again with biology. This means that by the

time students leave high school, they will have had all the subjects they will need for college.

Extracurricular Activities: Supporting the Instructional Program

In very small high schools, providing student activities can be a problem. Highlands High did not have enough students to field basketball teams—the most popular activity for students in rural areas. So the teachers fostered an activity better suited to the small size of the school: cross-country skiing.

> Because of our small size and the fact that you need a certain number of skiers just to have a team, it's important for *all* the kids to participate. They don't need to think of themselves as a weak member or a strong member. Just because they are a *member*, they are needed; they are important.

Although winning is secondary to participation, the skiers have been notably successful. The team travels to interscholastic ski meets in larger towns—and, once, to the state of New York. Eligibility to travel depends on success in the classroom. As each individual is indispensable to the team, peer pressure to do well is intense. Students see themselves as very significant—and they are. From the teachers' perspective, this travel provides exposure to the world beyond the tiny settlement of Highlands.

Summary: Getting Prepared for College

At Highlands, the emphasis is not on traditional values and subsistence lifestyles but on academics and college attendance. As we saw at Tundra High, the focus of the program has dictated a curriculum and schedule which serve the objectives. Finally, the extracurricular program provides motivation, esprit de corps, and exposure to the wider world.

Loggers High School
(12 students, 1 teacher)

A logging camp is the setting for our third school. Camp residents are primarily migrant lumber industry workers, about a

third of whom are Native. All the buildings in the camp are temporary. The community looks "modular"—as if a giant crane could lift the whole community and deposit it elsewhere, overnight.

Curriculum and Instruction: Individualization, Shift Schedules, Local Tutors, and Correspondence Study

Started only two years ago, the school has one teacher for the three secondary and nine elementary students. Also the teacher has *individualized* the program for each student. By doing so, she can offer her high school students a panoply of courses—including algebra I and II, geometry, trigonometry, physics, chemistry, biology, and earth science.

The teacher manages to offer such an extensive array of courses by *shift scheduling*: Some students come earlier in the morning, while others remain later in the afternoon. She also uses as tutors local people who are talented in math and science.

When students express individual interest in particular academic or vocational areas, the teacher arranges *correspondence study* for them. For example, one student is taking business law and psychology by correspondence, another is taking basic industrial drafting, and a third is studying German. An individual from the community who speaks German comes to school to tutor this latter student.

Inside her small classroom, the teacher moves from group to group and student to student throughout the day. She monitors each student's progress, providing immediate feedback and corrective activities as needed. While the emphasis is clearly on the work at hand and little time is wasted, teacher and students are comfortable and informal in one another's presence. The quality of their interactions is that of family members.

School and Community: A Broad Idea of Service

The teacher's relations with all community members seem, in fact, more family-like than formal. She does not limit her instruction to the twelve children in her charge. When she first moved to the community, she dropped in on each of the camp residents in

their trailer-like modules. Over a cup of coffee and the previous night's dishes, she found out who had not completed the requirements for their high school diplomas. She then started a GED program in the evenings. Everyone without a diploma attended—and most went on to earn their GED.

In addition, for community members who are interested in earning college credit, the teacher serves as an instructor for the area community college. In short, she sees the school as a resource for the whole community and makes herself and the school as available as possible. In return, the community is totally supportive of her and the educational program she has set up for their children and the community. Local residents call her "Alaska's human cyclone."

Summary: A Community Resource

For both teacher and community members, the level of satisfaction is very high. They have successfully capitalized on the small size of the school: High quality whole group instruction is mixed with small group work, creative enrichment activities, and intensive tutoring. Moreover, by offering services that fit the needs of residents, the teacher has managed to integrate the school with the community.

Riverside High School
(47 students, 5 teachers)

Comparatively large with forty-seven students taught by five teachers, Riverside looks much like a comprehensive school. Students change classes; there are seven 45-minute periods a day; in addition to the core academic classes, students take shop and home economics taught by specialists in these areas. In relations between teachers and students and between the school and the community, however, Riverside is unlike most comprehensive high schools.

Curriculum: Post-Secondary Education

The community of Riverside is a busy, sophisticated place. As many as four or five flights a day land and take off from the

gravel airstrip. In the summer, fishwheels turn slowly in the current, and the whine of outboard motors reverberates off the cliffs above the river.

All of the local advisory school board members have attended some college. Each year, several high school graduates enter a university. Others continue their education either in vocational schools or at the Job Corps facility in Washington. Community members feel that students are encouraged to attend college by the presence in the school of two teachers from the community who successfully completed bachelor degree programs at the University.

Expectations are clear and consistent. The goal of teachers and school board members alike is to prepare students for post-secondary education or training. Academic standards are high. Students who do not meet the standards are failed and must repeat the course. In their resolve to maintain standards, teachers have the full support of the community.

Inside the school, the emphasis is on serious academic work. Students read Shakespeare and produce a term paper replete with footnotes and bibliography in their English class. They study the traditional "raven" stories of the Athabaskan people as literature. In social studies, students follow a curriculum modeled on a university course to learn about the Alaska Native Lands Claims Settlement Act. All students are expected to take algebra II before they graduate.

School and Community: Sharing Information about Students

While the course offerings and the organization of the school do not depart radically from the large school model, the treatment of students does. The staff has been in the community for an average of four years each. They know the families of the students. In turn, parents know the teachers.

A student who is having problems or who is not working has no place to hide. The principal will contact the students' parents regularly to keep them informed of students' progress and to learn of home factors that may be influencing their in-school performance. Students cannot fall through the cracks: There are none.

Communications between the school and the community are made easier by the openness of the school. As long as their presence does not interrupt academic work, parents are welcomed at the school—not just for extracurricular activities or for parent-teacher conferences. Each spring, community members use the school to teach subsistence and traditional skills during Culture Week. Several aides and student teachers from the community are also involved in instructional activities.

Open access to the school for community members contributes significantly to the integration of community and school. Unlike other villages where the school is viewed as foreign turf, residents of Riverside village think of the school as their own.

Teachers are encouraged to stay by the support they receive from the community and the insistence on high academic standards.

Extracurriculars: Keeping them in Perspective

The staff relegates extracurricular activities to a secondary place after academics. Recently, when insufficient funds threatened teaching positions, the principal took the political risk of shifting money out of travel for the basketball team to maintain the academic program. While such a move exposed them to criticism, the principal, the staff, and the school board felt they ought to put their money where their expectations are.

Summary: A Single Message at Home and at School

Students at Riverside High get the same message at home and at school: There is no excuse for poor academic performance. Both teachers and parents expect that students will continue their education beyond high school. Classes are selected to prepare students for post-secondary education. And extracurricular activities are not allowed to interrupt the teaching of academic skills and knowledge.

Finding No. 6: Some small high schools have developed a negative school culture marked by community-school hostility and classroom apathy.

Schools That Aren't Working

Not all of the schools we visited displayed the energetic and concerned staffs, community-school cooperation, and engaged students portrayed above. Some were downright depressing places—plagued by attendance and drop-out problems; peopled by apathetic teachers and students who were bored into silence by an unending march of worksheets across their desks; assailed by community members who were hostile to the teachers and alienated from the school; and buffeted by bureaucratic storms brewed in a central office jealous of its control over the local school.

Determining why some schools are like this is not easy. When we interview students, teachers, and community members, we get a lot of finger-pointing but little agreement on the causes of the problems. Students and parents blame the teachers: ". . . they're just here for the money—they don't really care about the students and the community." Teachers blame the students, or, more frequently, the parents: ". . . they don't really care about the kids, just letting them run wild, not getting them to bed at a reasonable hour, not encouraging them to do their work. . . . " Indeed, these tag-team accusations are themselves part of the problem.

In such schools, a culture develops that is resistant to change and is self-perpetuating. New teachers meet suspicion and even hostility in the community. Discussions with former or veteran teachers may predispose newcomers to find these attitudes in the village. Teachers who are veterans of rural schools and who know the "buzz" may avoid the village because of the school's bad reputation. As a consequence, the culture is perpetuated from year to year. A major issue for rural education is: How do we break this cycle?

Below we describe two of the schools that are not working

well. For each site, we identify the problems that seem most serious.

Fishertown High School
(7 students, 1 teacher)

Most of the residents of Fishertown support themselves by commercial fishing during the summer. Unlike fishermen in Bristol Bay and Southeast, residents of this riverine community do not make a great deal of money. Most just get by. During the rest of the year they pursue various subsistence activities—hunting, trapping, and ice fishing.

A serious problem in the community is alcoholism. While no reliable information exists on the proportion of residents who suffer from the problem, drinking is sufficiently serious to bring all activities but schooling to a complete halt when a planeload of alcohol is in town.

Staff: Turnover and Alienation

Staff at the school turns over almost yearly. A few years ago, three different principal-teachers came and went within the same school year. Such a high turnover rate prevents teachers from getting to know the community and the needs of the students. Parents, in their turn, refer to "those teachers" as though they were a foreign species visited upon the community, a species to be tolerated but not encouraged.

In the past, teachers at the high school level tended to use textbooks and worksheets as the curriculum. The frequent changes in teachers have prevented the creation of a consistent, systematic academic program. The district office may have contributed to the problem by appointing principal-teachers whose first loyalty is to the district office—a pattern common throughout the schools in the district. The superintendent has carried this to the point of recruiting principals and principal-teachers who hail from his home state. While a vocal advocate of local control, the superintendent allows site administrators and their advisory school committees little latitude in deciding educational questions.

Teacher-student interactions are not characterized by open hostility. Instead, interactions are curiously flat. Everyone seems to be going through the motions. Between teacher and students a tacit agreement appears to exist: "If you don't ask too much of me, I won't demand or expect much from you."

Fishertown High is hostage to a past characterized by high teacher turnover, a mutual antipathy between teachers and community members, and a central office more concerned with maintaining its control than in supporting quality education. While not hopeless, the situation is discouraging.

Crafton High School
(18 students, 4 teachers)

Located in a remote, sea-side area, Crafton is home to a Native group that has successfully maintained its heritage. An impressive number of Native leaders claim this village as their hometown. Given their pride and their commitment to self-determination, the residents have had surprisingly little success with their local high school, which falls short of the expectations—of both community members and teachers.

School and Community: Isolation

The high school is socially and physically isolated from the community. Interactions between teachers and community members seem limited to a bare minimum. The teachers congregate and are seldom seen beyond the imaginary boundary of their own little community.

Inside the school, superficially congenial banter between teachers and students veils the absence of genuine rapport. Relations between pupil and teacher are characterized more by apathy than by open animosity.

Outside of class, students express their hostility in no uncertain terms. Plywood covers several of the ground-floor windows that were broken by students who hang out on the open breezeway at night. At no other school we visited did we find such vandalism.

Community leaders openly express hostility towards both teachers and the local administrator: "All they're here for is their paychecks." No one in the community—whether parent, school board member, community leader, or teacher—believes that students who graduate from the high school will be prepared for anything, whether it be college, wage work, or subsistence. The best anyone seemed to be able to say of the school is, "It keeps our kids at home with their families." Some people even questioned the value of this advantage, feeling that the restrictive environment of the small village limits their children's future options.

Festering beneath these negative views of the school is the issue of local control. Everyone we spoke with believes that real control lies in the hands of the district administrators who were seen as self-serving bureaucrats rather than committed educators. Fueling their resentment is the residents' lack of control over hiring, evaluating, and retaining the teachers. Many in the village have concluded that the best solution is to become an independent school district.

Curriculum and Instruction: Lack of Commitment

No one seems to believe that students will learn anything of value at the school. One parent of a high school student told us:

> I only went through the sixth grade. I dropped out due to TB. But my daughter, who's a senior, doesn't know as much math or English as I do. I help her and correct her English and math.

Even those community members who would be most likely to support the school are disaffected: Two of the local advisory school board members are sending their children to a boarding school. As one of them said, "We see nothing (educational) happening locally. We're sending our kids out."

Summary: The Culture of Mutual Hostility

At Crafton High School, a culture has developed in which professionals and community members see themselves as antagonists. Neither has faith in the other. These attitudes subvert learn-

ing. Simply the fact that instruction takes place within the school undermines its legitimacy in the eyes of residents. Until the professionals and the community resolve the political issues of control and the educational issue of curriculum emphasis, both instruction and learning will remain hostage.

Summary: Schools That Use Their Smallness and Those That Do Not

Our field work produced convincing evidence that size is not the critical factor in determining the quality of education in small rural high schools. Some very small schools with fewer than ten students work well by such standard criteria as attendance, student behavior, staff expectations, and community satisfaction. At the same time, some of the larger rural high schools are not working so well.

The question is not whether small schools *can* provide an adequate secondary education. Rather, the question is, what distinguishes good small high schools from those that are not so good?

We found differences between good schools and poor schools in five major areas: (1) school-community relations, (2) curriculum; (3) organization of instruction; (4) teaching staff; and (5) relations among local professionals, community members, and central office administrators. Obviously, to separate these areas from one another is artificial; in reality, the five are inseparable. Each influences the others and is, in turn, influenced by them. Each of these differences is discussed below.

School-Community Relations

In schools that are working well, the community and the school have forged a *partnership*. Teachers go to the parents and the local school board to find out what they want for their children. Parents and board members reciprocate by supporting the academic goals of the staff. Students cannot play one off against the other.

Where the school is not working well, staff do not seek guidance from community members. They view parents as uninterested and nonsupportive. Community members tend to view the teachers as carpetbaggers, eager to make their money and get out of town. Over time, these attitudes become embedded in the culture of the school, with the unfortunate consequence that even when the cast of characters changes, the attitudes persist.

Curriculum

The central factor in curriculum is not the courses the school offers. There appears to be minimal variation on this dimension: Limited staff and standard graduation requirements generate similar academic programs.

Rather, what good high schools have that others do not is a clear thematic emphasis that runs throughout the entire curriculum. Like a theme in a symphony, this emphasis appears in each subject—sometimes subtly, sometimes explicitly—to tie the elements together into a whole and to give the whole meaning to producer and consumer alike.

As with music, the theme varies from piece to piece or, in the case of schools, from setting to setting. In some schools, the theme is cultural preservation; in others, it is language development or college-prep; in still others, it is leadership or vocational training. The nature of the theme is, in many ways, less important than the mere presence of a theme.

In schools that lack such a thematic emphasis, teachers, students, and community members often pull in different, sometimes opposite, directions. Or, to extend our musical metaphor, they play different melodies. Teachers have their own expectations about what students should learn and what they should do after graduation. These are, of course, expressed through their methods, content emphases, and attitudes toward students. Where these differ significantly from the expectations of students and parents, the resulting dissonance frequently drowns out even the most carefully orchestrated instruction.

Organization of Instruction

In several of the smaller schools that we found to be working well, the teachers viewed organization—of the school day, the classroom, and the curriculum—as the handmaid of the instructional program rather than the other way around.

Educators in small rural high schools have a degree of flexibility that is the envy of their urban colleagues. Certainly the degree of flexibility is circumscribed by a number of factors—not the least of which are the policies and attitudes of the central office and the expectations of the local community. Yet, as we have seen, enterprising principals have used their relative autonomy from distant central offices in a variety of creative and effective ways.

Some have fashioned class schedules to fit instructional activities; for labs, projects, or instructional units that do not fit comfortably into a size forty-five-minute class, they have let out the seams—to create blocks of time. Some have devised programs that recycle every three years to insure that everyone gets the courses required for college. Some have teamed community members with teachers to deliver bilingual instruction in local history and subsistence skills. Some have used the opportunity for one-on-one tutoring to challenge students with a "great books and great ideas" curriculum. Some have developed activity-based instruction that uses the total environment as a laboratory to be explored, investigated, and reported upon.

Enterprising educators make up the common element in all these organizational variations. These educators are not hidebound to a single image of what a high school looks like and are willing to take risks to make the organization of schooling conform to the objectives.

In some of the schools we visited, the classroom was like those picture puzzles in the Sunday comics that depict a common scene and bear the caption "What's wrong with this picture?" The teacher stands in the front of the room lecturing or demonstrating a problem-solving method. The students sit at their desks, taking notes, following in the book, or doing a problem. After the lecture/demonstration, the teacher assigns several questions/prob-

lems from the book. The teacher then sits at her desk and corrects papers while the students do seatwork.

So what's wrong with the picture? *There are only six students present!* Such a classroom, organized around whole group instruction, is fairly typical of large urban high schools—*where there may be thirty or more students in each class.*

Our purpose here is not to disparage the organization of instruction depicted above. In particular, students who are going on to college benefit from experiences with this type of organization. Rather, we are questioning the appropriateness of such organization in the context of a small rural high school. In schools that are working well, teachers have taken advantage of their smallness and flexibility to organize instruction in a way that maximizes student involvement and learning.

Teaching Staff

In any school, the teaching staff is the heart of the enterprise. In small rural schools, the staff is, if possible, even more important than in larger urban schools. In a small school, a student may see only two or three teachers a day—unlike his urban counterpart who may see six or seven. He may see these same teachers for three or four years. Consequently, the teacher in a small high school constitutes a greater portion of each student's experience. If an urban student has one or two uninspired or incompetent teachers, chances are that his total school experience will be leavened by one or more inspiring, highly effective teachers. In a small rural school, one poor teacher can blight a student's entire experience.

Moreover, because of the small size of the staff, the intellectual range and interest of teachers in small rural high schools is even more important than is generally true. Again, students do not come into contact with as wide a range of teachers as they are likely to do at a larger school. Teachers in small rural high schools, as a result, must provide information on and stimulate interest in as broad a range of topics as possible.

In discussing organization above, we pointed out the most salient characteristic of the teaching staff in small rural high schools: a willingness to set aside preconceived ideas about what

the classroom ought to look like and to organize their instruction to fit the aims and objectives of the program and the opportunities that small size presents. This involves taking risks and using imagination, experience, and professional expertise.

As we have also argued, educators in the schools that are working learn the expectations and goals that parents and students hold for high school and after. In determining the objectives and the emphasis of instruction, educators accommodate these expectations and goals. These principals and teachers use this consultative approach not only with the community but with each other as well. A faculty meeting need not be called to get staff heads together; instead, teachers in small schools frequently "huddle"—in classrooms, hallways, the office—to discuss schedule changes, troubled and troublesome students, coming events, and so on.

After getting an idea about goals and expectations, these educators take the next step and ask: how can we best achieve these ends—given the circumstances *here*?

In working out an answer to this question, successful teachers seem to use their experience of teaching and of the community, their professional knowledge of effective practices, and their capacity to imagine different arrangements for learning. Unquestionably, the culture of the institution—of the school and the school district—can encourage or impede any of these processes. Some superintendents push their principals and teachers to develop new approaches and programs; others regard innovation as a threat to their control. In some schools, the principal and staff are open to new ideas; in others, suggestions about new arrangements meet with hostility or indifference.

In our fieldwork, however, we found teachers throughout the entire spectrum of institutional settings—from open and supportive to closed and hostile—who have developed innovative and effective instructional programs. Apparently, teachers and communities intent on making schooling meaningful and effective for the students can change the culture of their school.

Finally, teachers and principals at schools that work are opportunists; they use the flexibility afforded by their small size to seize educational opportunities. As one principal told us:

> If something is happening in the community—a land planner from BLM is in town or someone from Fish and Game, or someone lands a beluga, or there's an important legislative debate on TV—whatever, we can change our whole day or even the whole week at a moment's notice so we can use whatever is happening.

To summarize our observations of educators at schools that are working, we found that these principals and teachers are broadly educated people who are willing to take risks and to change institutional and instructional arrangements to meet their goals. They consult with one another and with the community in determining educational objectives and the best ways of meeting these objectives. Finally, they are opportunists who seize whatever promising education opportunities come their way.

Relations Among Local Professionals, Community Members, and Central Office Administrators

Schools that are working are much more likely to be in districts where the central office administrators encourage local professionals to consult with community members and to take the initiative in fitting the instructional program to the needs of the community.

Schools that are having problems providing good instruction, on the other hand, tended to be in districts characterized by a very different constellation of control. Typically, the administrators in charge of these districts believe that their principals and teachers owe first loyalty to the central office, not to the local community nor to quality education.

The resulting culture in such districts can only be described as colonial: Professionals see themselves as short-termers, living a life of material deprivation to earn good money. They keep to themselves and their quarters as much as possible. They feel their job is to administer policies that come down from the central office. First loyalty is owed to the "mother country"—in this case, the central office.

The attitudes, beliefs, and values of this culture make it highly improbable that local professionals will work with the

community to tailor the school program to the needs of the students. One way in which this culture perpetuates itself is through recruitment of new principals and teachers. Administrators in these districts frequently recruit their principals from their home state or alma mater. As members of the "old boys" network, these principals can be counted upon to be like-minded and remain loyal to the central office in any dispute with the communities.

Conclusion

As we stressed above, identifying individually the elements that distinguish good schools from poor schools is somewhat misleading. Our visits to the thirty-two schools brought home to us *the importance of the total school culture to the quality of education being offered.*

Most exciting about small rural high schools is the relative ease with which communities and teachers, working together on common goals, can transform the culture of their schools. Because of their smallness and relatively uncomplicated environments, rural high schools are much more susceptible to change than large urban schools, which are embedded in a tangled skein of bureaucratic politics, history, and competing subcultures.

Not only can small rural high schools work but, at their best, they represent perhaps the most promising environment possible for quality education. Teachers can give students the time and attention as well as the emotional support needed for mastery of learning. Community members and educators together can design an instructional program that takes advantage of local educational resources and suits the needs of the students and community.

Realizing the potential of the rural schools requires the involvement of three groups:

- **Educators** who are aware of local needs, are willing to take risks, and are ready to capitalize on educational opportunities where and when they find them.

- **Community people** who will work with local educational

professionals to define appropriate educational goals and then support the professionals in achieving those goals.

- **Central office administrators** who give local educators and communities the latitude to create an instructional program that uses local opportunities and meets locally defined needs.

Currently, there are small high schools in rural Alaska where these groups have cooperated to create high quality instruction programs. Small size is no impediment to excellence. Indeed, smallness may give rural high schools an educational edge.

Summary of Findings: Part IV

Alaska's small rural high schools have devised many innovative strategies to deal with the educational difficulties small size creates:

ISSUE 1: LIMITED NUMBERS OF TEACHERS, COURSES, AND EXTRA-CURRICULAR ACTIVITIES.

STRATEGY: To increase variety, small high schools are employing instructors from the community, using elementary teachers to teach their specialties in the high school, enrolling high school students in summer programs and university courses, rotating the curriculum each year, etc.

ISSUE 2: PROVIDING VOCATIONAL EDUCATION.

STRATEGY: To offer vocational training in a small school, small high schools are starting student-run businesses, using itinerant vocational teachers and local people expert in a craft, sending students to a central vocational facility for short courses, and setting up work-experience programs.

ISSUE 3: HELPING STUDENTS BECOME COMFORTABLE AND COMPETENT OUTSIDE THE VILLAGE.

STRATEGY: Rural schools sponsor a variety of travel programs—trips to other rural communities, urban centers, and even foreign countries.

ISSUE 4: RAISING LOW ACHIEVEMENT TEST SCORES.

STRATEGY: Rural school districts are teaching test-taking skills, developing criterion-referenced tests that match the curriculum, and developing ways to get parents interested in raising test scores.

ISSUE 5: PREPARING STUDENTS FOR COLLEGE.

STRATEGY: To increase college success, some small high schools are establishing special classes which teach students the academic skills college requires. Summer college preparation programs on campus are also showing exceptional promise.

ISSUE 6: HELPING RURAL STUDENTS MAKE A TRANSITION TO ADULTHOOD.

STRATEGY: An exceptionally promising approach is the post-secondary counselor, who works with the high school graduates—helping them succeed in college and find employment. This counselor, located in the district office, helps students move from the nurturance of the small high school to the independence of adulthood.

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PART IV:
Problems Exist . . . But So Do Solutions

Introduction

In this section, we examine educational problems common to small rural high schools. We also identify some of the strategies different school districts and high schools are using to cope with these problems. Throughout this study, we have been impressed with how *innovative* rural educators and rural communities have been in figuring out how to make a small high school effective.

We repeat our earlier caution: One small high school is not like another. The problems we discuss may be common problems, but they are by no means present in every small high school. Similarly, educational strategies that work well in one school or district may be completely inappropriate in another.

Small Rural High Schools Face Immense Demands and Expectations from Rural Communities and Educators

Recent research on the comprehensive high school argues that even mammoth urban high schools cannot fulfull the naive, swollen goals society has foisted on them.[1] Small rural high

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[1]For the representative critique of comprehensive high schools, see Theodore Sizer, *Horace's Compromise: The Dilemma of the American High School* (Boston: Houghton Mifflin, 1984) and Ernest C. Boyer, *High School: A Report on Secondary Education in America* (New York: Harper and Row, 1983).

schools face similar and even worse pressures.

Rural communities, despite their geographic isolation, have a clear image of what the "high school" is and should be. Many rural residents have attended and many rural teachers have taught in traditional comprehensive high schools. A "real high school" has classes of twenty-five students, 50-minute periods, departments, specialized courses, athletic teams, a swimming pool, and a running track. Rural people understandably compare the small rural high school with what is standard—the large comprehensive high school—and press for more courses, activities, and services.

Small rural schools, however, are expected to do even more than urban schools. They are expected to provide a sound academic program. They are expected to provide recreational and community services for adults as well as adolescents. They are expected to prepare students for employment and higher education in the world outside the community. At the same time, they are expected to teach local skills and to help preserve the traditional culture.

It is tempting to argue, as have others, that the small rural high school should narrow its scope to academic instruction.[2] It should simply divest itself of its myriad other tasks—recreation, vocational education, socialization for the outside world—and turn them over to other institutions. We do not make this argument, because such an approach is unrealistic in most small Alaska communities.

First, most rural communities want their high schools to offer more than a basic academic program—much more. They want their schools to have the same athletic teams, advanced courses, elective courses, art and music programs, and extracurricular activities as urban schools. According to school board presidents, these are the requests they hear over and over again from their rural constituents.

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[2]Ray Barnhardt, *Small High School Programs for Rural Alaska: Vol. I* (Fairbanks, Alaska: School of Education, Center for Cross-Cultural Studies, 1979).

Second, the sports, recreation, and community education programs of small high schools make it easier for schools to perform their academic functions. These programs create community good will, develop student loyalty to the school, and increase academic motivation. Students maintain their grades, for example, in order to play on the basketball team. Younger students see the prestigious basketball stars meeting school demands and imitate their behavior. These sources of academic motivation and good will are not trivial, particularly in rural areas, where the value of formal academic skills is not always obvious.

Finally, the small rural high school cannot turn over its nonacademic functions to other community agencies because many small villages have no alternative institutions to assume them. The rural high school, despite its small size, enjoys institutional advantages rare in village Alaska: stability, secure funds, well-maintained facilities, and a professional staff linked to resources and expertise outside the community. In rural Alaska, even more than urban areas, the high school will remain an institution with multiple functions, trying to balance competing demands.

In short, we do not dismiss the immense demands faced by small high schools and propose instead a Utopian ideal of what a small rural high school should be. We realize that Alaska high schools now face and will continue to face these demands. We discuss them straightforwardly and describe the innovative ways Alaska's rural high schools are actually going about meeting them.

ISSUE 1: LIMITED NUMBERS OF TEACHERS, COURSES, AND EXTRACURRICULAR ACTIVITIES

The Issue[3]

Alaska's small high schools offer a basic academic curriculum. All schools provide the English, science, mathematics, social studies, and other courses needed to meet statewide high school graduation requirements;[4] some small high schools exceed state requirements (see Exhibit E).

Most rural high schools have also developed a second localized curriculum—subsistence skills, cultural heritage programs, land claims instruction, and local craft skills.

Despite their size, small high schools also provide a surprising variety of sports, school clubs, and activities. About 75 percent of them, for example, offer three or more athletic activities, a school yearbook, student council, and such recreation as school dances or rollerskating.

Of course, the smaller the school, the more limited the facilities, curriculum, and activities. Schools with forty or more students typically have a separate building, gym, library, counselor, and full academic program; schools with ten or fewer students often have quite modest offerings.

Small high schools in general offer few advanced courses, few elective courses, and few art or music programs.

- While most small high schools offer algebra and geometry, only 28 percent offer trigonometry, and only 12 percent offer calculus.

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[3]See Appendix I for statistical documentation of the points discussed in this section.

[4]Since April 1983, Alaska has required graduating high school students to complete 21 credits. The state Board of Education requires that four of these credits be earned in language arts, three in social studies, two in science, two in mathematics, and one in physical education or health.

EXHIBIT E

High School Graduation Requirements in a Typical Rural District with Many Small High Schools

(A) 16 quarters (4 years) of attendance required for graduation
(B) 21 credits required for high school graduation
(C) Required Credits:

English	–	4 credits	(Note:
Science	–	2 credits	Students not on
Math	–	2 credits	grade level in reading
Social Studies	–	2 credits	will still be required
Vocational Education	–	2 credits	to take reading courses.)
Health/Safety	–	1 credit	
Physical Education[a]	–	2 credits	
Electives[b]	–	6 credits	
TOTAL		21 credits	

[a]Two credits in physical education required, preferably in grades 9 and 10. Student may elect to take more than two years of physical education, but only two credits in physical education will be counted toward graduation requirements.

[b]A student, during his high school career, may take any six electives *if he is on grade level in reading* according to the total reading score on the California Achievement Test. If a student is not on grade level in reading according to the standardized reading test, he must use his electives to take one credit of reading per year, to a maximum of four credits, until the C.A.T. demonstrates the student is on grade level in reading.

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- While most small high schools offer biology, only 56 percent offer chemistry, and only 12 percent offer physics.

- Fewer than half the small high schools offer separate courses in art, music, band, orchestra, or a foreign language.

About Half of Small High School Teachers are Teaching Outside Their Fields

According to the principals we interviewed, one of the most serious disadvantages of small high schools is teachers instructing outside their fields.[5] Most small high schools face this problem (Table 12).

Rural college students express outrage at the poor preparation of some of their high school teachers. We asked rural students enrolled in a course on rural education at the University of Alaska, for example, how to achieve quality education in small high schools. Their most frequent suggestion (19 of 42 students) was: "Do not get teachers who teach subjects they don't know about."

Teacher turnover is high in many rural high schools; only 5 percent of certified teachers and administrators in small high schools are Alaska Natives.

Because of the high turnover (Table 13), many new rural high school teachers must not only teach subjects outside their fields, they must also prepare new courses. Very few teachers are local Native residents.

Strategies to Expand Staff and Curriculum

Alaska's rural high schools have developed a multiplicity of ways to expand their teaching staff, curriculum, and activities. As a result, most small high school students enjoy far more diversity in teachers, courses, and extracurricular activities than those distant from the situation realize.

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[5]See Part II, Table 5.

Table 12

Most Small Rural High Schools Have Some Teachers Instructing in Subjects Outside Their Field of Specialization

Number of Certified Professionals Teaching Outside Their Specialization	Proportion of Schools
None	16%
Only One	30
Two or Three	43
Four or more	11
Total	100%

N = 146

Source: ISER Small High School Study, 1984.

Table 13

Staff Turnover is High in Small Rural High Schools

Proportion of Certified Professionals Who Returned for 1984-85 School Year	Proportion of Schools
80% or more	45%
60-79	24
40-59	11
Below 40	20
Total	100%

N = 147

Source: ISER Small High School Study, 1984.

For example, schools use administrators and elementary teachers with special expertise to supplement the high school staff. Small rural schools also supplement their staff with community people who have specialized knowledge, itinerant teachers, special tutors, and others. Very few rural students spend their school day with only one or two teachers (Table 14).

We describe below some of the major strategies small high schools are using to expand their staff and curriculum:

Innovative Staffing Strategies

- **Community People.** Using community residents to teach courses is the most common way small high schools expand their staff, and most schools find this strategy quite effective (Table 15). Community residents teach local skills—sledmaking, repairing fishnets, kuspuk making, repairing boats and snowmachines, preserving food—and also academic subjects. In one community we visited, for example, a nurse took over the chemistry course. Community residents also tutor advanced students, supervise evening study hall, organize the library, and so on (Exhibit F).

- **Elementary Teachers and Administrators.** Many small high schools use elementary teachers and administrators to teach their area of expertise to high school students (Exhibit G). One

EXHIBIT F

Local Corporation President Teaches Corporation Management Course

The high school hired the local corporation president, who has a teaching background, to give a course on land claims and business corporation management to its students. The instructor supplements conventional course materials with discussions of the current activities of the local corporation and invites other corporation members into the classroom.

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Table 14

Most Rural High School Students Have Instructional Contact with Three or More Certified Teachers*

Number of Certified Teachers Working with Small High School Students	High School Size				
	10 or less	11-20	21-40	41-100	Total
Only one	38%	–	4%	–	12%
Two	22	9	–	–	9
Three	24	32	2	–	16
Four	12	12	15	–	11
Five or more	4	47	79	100	52
Total	100%	100%	100%	100%	100%

N = 141

*These include elementary teachers and administrators.

Source: ISER Small High School Study, 1984.

especially innovative school used a European staffing model: Specialized teachers taught all students above the first grade level. The school hired teachers with the understanding that they would have both elementary and secondary school teaching assignments. As a result, the seventeen high school students were taught by six different certified teachers—specialists in their fields.

- **Itinerant Teachers.** Most districts use itinerant teachers in such specialized areas as music, art, special education, and counseling. Sometimes the itinerant teacher instructs students in a block program, lasting a week or two. Sometimes the itinerant teacher helps the local teacher or a community person to prepare a program. One district, for example, has an itinerant specialist for gifted and talented students who helps the local teacher or a community person set up an after-school tutoring program for gifted and talented students.

Table 15

Small Rural High Schools Use Multiple Strategies to Expand Their Programs

	Proportion of Schools Using Strategy	Proportion of Schools Finding it Effective
Community residents to teach specialized knowledge	75%	92%
Elementary teachers to teach high school courses	64	96
Community projects, such as a newspaper or museum	58	92
Special tutors for academically talented students	53	95
Work experience programs	53	92
Mini-courses	41	88
Block scheduling	40	83
Summer programs	38	91
Correspondence courses	35	54
Sending students to a centralized vocational facility	32	92

N = 161

Source: ISER Small High School Study, 1984.

- **Artists-in-Residence and Other Short-term Specialists.** Small high school principals find extremely effective the Artists-in-Residence Program, which brings a painter, photographer, or other artist to the community for a few weeks. Some districts employ urban specialists to work in their small high schools under short-term contracts. The short-term contract gives districts flexibility and avoids the burden of additional tenured teaching staff.

EXHIBIT G

Using Elementary Teachers in the High School

One of Lake School's elementary teachers has a number of credits in algebra. She is also experienced in spinning, weaving, and sewing. When she teaches algebra in high school, the principal picks up her elementary class (he has taught on this level before). The elementary teacher also teaches a home economics class in high school during the last period of the day after the elementary students are dismissed.

Curriculum and Organizational Innovations

Many high schools take advantage of the flexibility small size offers to create a school schedule and course organization well adapted to their particular situation:

- **Course Rotation.** Small high schools typically rotate courses each semester (Exhibit H). American history, for example, may be offered only once in a four-year sequence. When it is offered, all students enroll and teachers assign work appropriate to each student's academic skills.

- **Community Projects.** Many small high schools emphasize community-based projects in their courses, an approach principals find quite effective (Exhibit I). These projects integrate different subject areas, teach higher order inquiry and communications skills, and result in a satisfying, tangible product. Students in one high school, for example, published a *Visitors Guidebook* that described their community. Students in another community established a museum; they collected, catalogued, and described local tools and artifacts.

- **Mini-courses.** Many small high schools add variety to their programs by offering mini-courses between semesters or during one quarter. Teachers offer such subjects as archeology, rural issues, guitar, quilting, or food-preservation in a short block of time.

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- **Special Interest Tutoring.** Some high schools enable students to sign up for a special interest course where the student works individually with a teacher. One school, for example, reserves one period a day for all students to take an individualized special interest course.

- **Block-scheduling.** Some high schools schedule certain courses as two-hour blocks—lab sciences, yearbook, student-run business enterprises, etc.

- **Combined Classes in One Period.** Small high schools often schedule one teacher to teach more than one course during a class period (Exhibit J).

- **Later Starting and Closing Times for the High School.** Some schools give the high school students more attention by having them start and end school an hour later than the elementary students.

Linking a Small High School with Other Educational Institutions

Small high schools have found many ways to have their students take advantage of the educational programs of other institutions:

- **Universities.** Many small high schools arrange for their students, especially advanced students, to take university courses offered by the local community college or a university-based distance delivery program.

- **Native Organizations.** Small high schools occasionally work out shared educational arrangements with regional Native organizations. One school, for example, offered swimming and water safety during the summer in cooperation with a regional non-profit Native organization.

- **Other Rural Schools.** Several small high schools routinely send their students to other rural schools for a week or two to take advantage of special facilities—for example, a salmon hatchery or swimming pool. One high school lacking enough students to

EXHIBIT H

A Rotated Curriculum in a 1-10 Student High School

1984-1985

Reading I-IV (9-12)
General Science (9)
Biology (10-12)
English (9-12)
Math (9-12)
Graphic Communications (9-12)
Alaska History (9)
Native Culture (9-12)
Bilingual (9-12)

1985-1986

Reading (9-12)
General Science (9)
Earth Science (10-12)
English (9-12)
Math (9-12)
Wood Shop (9-12)
Alaska History & Native Land Claims (9)
U.S. History (10-12)
Home Economics (10-12)
Physical Education (9-12)
Graphic Communications (9-12)
Bilingual (9-12)
Native Culture (9-12)
Art (10-12)
Music (9-12)

1986-1987

Reading (9-12)
Physical Science (10-12)
General Science (9)
English (9-12)
Current Events/Problems (10-12)
Health (10-12)
Physical Education (9-12)
Small Engines (10-12)
Typing (10-12)
Math (9-12)
Bilingual (9-12)
Native Culture (9-12)
Tanning & Skin Sewing (10-12)
Music (9-12)
World Geography (9)
World History (10-12)

1987-1988

Reading (9-12)
General Science (9)
Biology (10-12)
English (9-12)
Math (9-12)
Wood Shop (10-12)
Home Economics (10-12)
Typing (9-12)
Physical Education (9-12)
Graphics Communications (9-12)
Native Culture (9-12)
Music (9-12)
World Geography (10-12)
Government (9)

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EXHIBIT I

A Community Project: Getting an Airstrip

The community wants a bigger airstrip and needs to develop a funding proposal. Five high school students worked with a surveyor and an engineer after school and on weekends. They helped survey the area, drew profiles, and calculated the necessary amount of land fill. As the project moves on, the students will help write the proposal.

EXHIBIT J

A Virtuoso Performance: Teaching Five Business Courses in the Same Period

A business education teacher in a small high school teaches one computer I student, two computer II students, one typing I and one typing II student, and three accounting students during her first-session business class. During the sixth session of her school day she teaches four photography students, one typing student, and one accounting student. The students work at their own pace, following individualized assignment sheets or working through textbooks and workbooks. The teacher moves from student to student, answering questions and offering guidance. For covering introductory materials, the teacher divides the class into sections and works with each section at a time. "It takes a lot of organization and planning. But the students wouldn't be able to have the variety of courses if we didn't do it this way," she said.

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field a basketball team, joined another small high school with the same problem, and organized a joint team.

- **Urban Partner Schools.** Rural high schools occasionally arrange student exchanges with urban schools in Alaska or the Lower 48 (Exhibit K). Urban and rural students also swap letters, computer disks, and videotapes of their schools.

Summer Programs

Several districts expand their curriculum and help students from small communities meet new people by sponsoring summer programs of their own or by sending students to summer programs elsewhere.

- **Summer Camps.** A few districts offer summer camps—academic boot-camp, traditional fish camp, aviation camp, computer camp, etc.

- **Summer Programs.** Some districts send students to statewide fine arts programs, music programs, or cheerleading camps. Some send students outside Alaska to such programs as university-based programs for gifted and talented students.

EXHIBIT K

A Village High School Student Goes to New York for a Music Program in a Student Exchange

A student spent three weeks in New York City this year. The girl stayed with a host family and participated in an intensive music program at a New York High School. At the same time, five students from New Jersey, Denver, San Francisco, and New York visited her community. The students from the Lower 48 wanted to go on a week-long, winter camping trip in Alaska. All these schools belong to a network offering student exchanges for schools with special programs—The National Network of Complementary Schools.

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Distance Education: From High Technology to Conventional Correspondence Courses

The state of Alaska has developed a sophisticated educational system for distance education delivery ("Learn-Alaska"). Alaska is the only state to have its own communications satellite. Rural Alaska communities receive instructional television, which includes a variety of programs on such subjects as government, science, and careers. Through audio-conferencing, students in an isolated rural community can talk with distant professors and with students in other communities.

Alaska universities make considerable use of this system to deliver courses to remote, isolated communities. For this reason, we were surprised at how infrequently rural principals mentioned either instructional television or audio-conferencing as ways they use to expand their curriculum.[6]

When people with little experience in education think about how to deliver instruction to small remote communities, they often envision a high technology quick fix. They see rural students sitting intently at computer terminals hooked by telephone to massive mainframes, television monitors on the desk beside them. They see a classroom that looks like mission control for a satellite launch.

Alaska's rural high schools, we found, are expanding their programs by choosing people-rich and experience-rich strategies, rather than high technology. The schools do use high technology, especially microcomputers. *But they use technology to supplement instruction, not to deliver courses without a teacher on site.*

High technology *can* be used to expand course offerings in small, remote schools. Right now, however, it is not being used well. Many rural teachers, new to the state, do not know how to

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[6]We asked rural principals what methods they used to increase course variety and mentioned instructional television as a possible example in the interview question. We did not, however, include a question directly asking about use of instructional television. For this reason, we do not present usage statistics in this report.

take advantage of instructional television and audioconferencing. Rural teachers say they lack the time to tape and preview instructional television programs or to make all the arrangements for an audioconference.

Many teachers who do know how to use instructional television and audioconferencing are enthusiastic about it. We describe below the various long-distance education programs that some schools are using:

- **Microcomputers.** The Department of Education has developed an Individualized Study by Technology (IST) program specifically for rural high schools.[7] It consists of eight different computer-based courses, such as Alaska History, U.S. History, Developmental Reading, and Health Education. Printed materials, audio tapes, student projects, and written assignments supplement the computer-assisted instruction. While the courses cannot be completed without some teacher assistance, the IST program typically frees the teacher for other activities during an IST course period.

Many schools use microcomputers to publish student writing —professional-looking newspapers, books of student stories, and poetry (Exhibit L).

In addition to using already available software, some districts develop their own software. One district, for example, developed a program to correct the particular language errors common in the area by means of locally relevant stories.

Small rural high schools have large numbers of microcomputers—indeed a 1-to-4 computer/student ratio (Table 16). Rural teachers report students remain enthusiastic about computers after the initial novelty has passed.

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[7]For a description of these programs and program evaluations, contact the Office of Educational Technology and Telecommunications, Alaska Department of Education, Pouch F, Juneau, Alaska, 99811. An outside evaluation gave the IST program a favorable assessment. Most rural school districts have ordered these materials, especially the Alaska History course.

EXHIBIT L

Using the Microcomputer in One Village High School

- Students in the Inupiaq Studies class wrote a book of Eskimo stories using a word-processing program and printing programs. The book is a collection of short stories written by contemporary students from the point of view of an Eskimo teenager living in the area long ago.

- Students are using the microcomputer to publish a community newspaper that features school news, local news, advertisements, jokes, editorials, and cartoons.

- One teacher, faced with students of very different reading levels in his class, used the word processor to rewrite textbook materials to match students' reading abilities.

- **Instructional Television.** Most rural communities receive educational television via satellite. The programming covers diverse topics for different grade levels. Some programs are particularly suitable for high school students: An example would be "Rights and Responsibilities," an eleven-part series for juniors and seniors which examines law enforcement, the law of contracts, and voting. Teachers can show these programs to their classes as they come off the air, or they can videotape them and show them later.

Table 16

Students of Small Rural High Schools Have Large Numbers of Computers Available for Their Use

Average Number of Computers Available for Student Use	High School Size			
	10 or less	11-20	21-40	41-100
Number	2.6	5.3	8.2	11.0

N = 146

Source: ISER Small High School Study, 1984.

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- **Audioconferencing.** Alaska's audioconferencing system enables students in remote village high schools to talk with teachers and students in different locations. Using a speaker box and several push-to-talk microphones, people at different locations can participate in the full conversation without having to hold a telephone receiver to their ears.

  Rural high schools use the audioconferencing system extensively for administrative business, in-service education, curriculum planning meetings, and other organizational matters.

  Only a few high schools use audioconferencing for student instruction. These schools use the system mostly for special activities (Exhibit M). Audioconferencing is particularly valuable for students in isolated communities because it gives them needed practice in expressing ideas to people they do not know personally.

EXHIBIT M

Using Audioconferencing in a Small High School

- A science class used audioconferencing to call up NASA at the Langley Research Center in Virginia. Students listened to a live narration on the Space Shuttle Program and watched an accompanying slide show sent to their school. They took notes during the talk and then asked questions. The NASA official also asked questions: He didn't know much about arctic villages. "It just blows your mind to see this happening," said the teacher.

- One school district sponsors a reading club through audioconferencing. Students from ten different sites talk to each other about books they are reading.

- Washington high school students studying Alaska dialed into the system to receive first-hand information. Students from different Alaska high schools talked to them about life in their communities and got practice in presenting information to an audience with a different perspective.

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School districts do not use audio conferencing to deliver courses to students in small remote high schools from a teacher in a central location. Rural high school students, however, occasionally enroll in college courses taught this way. When we asked curriculum planners why they did not use audio conferencing to deliver coursework, most said (1) it was hard for students to listen attentively to a disembodied voice on a speaker phone, (2) lab work and projects were difficult to do with a telephone, and (3) most rural high school students needed the personal support of an on-site teacher.

- **Correspondence Courses.** Correspondence courses are the old grey mare of distance education. About 35 percent of the small high schools use them (Table 15). The courses provide advanced electives for students who have progressed beyond what a small high school could offer. Teachers especially used correspondence courses for subjects they lacked the background to teach.

Only about half the principals said that correspondence courses were an effective educational strategy. They stressed that rural students did not like to work alone, and it was hard to maintain motivation.

Summary

Rural communities want their high schools to offer more courses and activities. In response, the schools have developed a wide variety of imaginative educational strategies. Except in the smallest high schools, most community school committee members and district board presidents expressed satisfaction with the basic academic program (Tables 17 and 18).

Unlike rural schools in many areas of the United States, Alaska's small high schools enjoy generous funding. Most can afford to send students to other schools, purchase many microcomputers, and employ part-time teachers from the community. If school revenues decline, some of these options may be foreclosed. With high funding levels, rural high schools can find many innovative ways to overcome problems resulting from small size and remote location.

Table 17

Local Board Members are Satisfied with Most Curriculum Areas in Small High Schools

Proportion Fairly Satisfied	High School Size				
	10 or less	11-20	21-40	41-100	Total
Basic Academic Program	79%	91%	85%	89%	85%
Broadening Experiences	75	93	82	76	82
Course and Teacher Variety	65	82	85	94	82
Preparation for College	67	88	77	94	77
Cultural and Rural Subjects	52	88	92	100	75*
Vocational Education	50	69	70	53	60

N = 177

*Note that most community people are satisfied with the localized curriculum except in high schools of ten or fewer students.

Source: ISER Small High School Study, 1984.

Table 18

District Board Presidents are Satisfied with Many Curriculum Areas in Small High Schools

Proportion Fairly Satisfied	Total[a]
Basic Academic Program	81%
Cultural and Rural Subjects	73
Course and Teacher Variety	71
Broadening Experiences	58
Preparation for College	47
Vocational Education	_[b]

N = 31

[a]Since board members have high schools of different size in their districts, we do not present satisfaction by size of high school.

[b]We omitted this question through error. District board presidents did say that vocational education was one of the needs they heard most about from their constituents.

ISSUE 2: PROVIDING VOCATIONAL EDUCATION

The Issue

Vocational education, in the eyes of both community people and rural educators, is the single weakest area of small high schools (Tables 17 and 19).

In Appendix I, we identify the specific vocational courses offered by small high schools. Most provide instruction in woodshop, welding, computer programming, and office skills. About half offer business management, house building, and supervised employment. But almost no schools offer sustained, cumulative training in technical occupations.

Providing vocational education in rural schools presents a host of issues beyond the obvious problems of limited equipment and few qualified teachers.

First, the strong community demand for vocational education reflects not only the increasing importance of the cash economy in rural villages but also the continuing lack of local employment opportunities. For the many students who want to stay home after high school, vocational education programs in the high school will not help them get what they are really after—a well-paying local job.

Second, many village students need a vocational education program emphasizing both exposure to career possibilities and also work-experience. In small rural communities, students cannot observe a variety of jobs as they go about their daily lives. Unlike urban students, most rural students do not learn about work through part-time jobs after school. Few such after-school jobs are available. Only a quarter of the students we surveyed said they had a paying job—many of these through school work-experience programs.

Third, no consensus exists on what a "vocational program" should be or do either on a national level or in rural Alaska. Authors of many national reports indeed argue that the best form

Table 19

Principals See Vocational Education and Preparation for College and Urban Life as the Weak Areas of Small High School Programs

	Needs a Lot of Improvement	Needs Some Improvement	Needs Little Improvement
Vocational Education	32%	41%	27%
Preparation for Urban Situations	29	45	25
College Preparation	22	55	23
National/International Issues	17	60	23
Native Language/Culture Programs	16	40	44
Basic Academic Programs	11	54	35
Contemporary Native Rural Issues	10	53	37

N = 133

Source: ISER Small High School Study, 1984.

of vocational education is academic education; specific job training should be postponed until after high school. [8]

Finally, when people talk about the difficulty of providing vocational education in small rural high schools, they do not distinguish between programs with different purposes. *Small high schools are well adapted to offering some types of vocational education but poorly adapted to offering other types.*

[8]See, for example, the discussion in Ernest C. Boyer, *High School: A Report on Secondary Education in America* (New York: Harper and Row, 1983), pp. 121-130.

Purpose of Vocational Program	Can a Small High School Do This?
Provide work-experience and career exploration.	Yes. Usually a school can make arrangements in the community or outside it.
Teach practical local skills, such as small engine or diesel repair.	Yes. Small high schools, which can draw on local crafts people, are especially well suited to teaching these skills.
Prepare students for specific jobs through specialized training programs.	Not usually. Exceptions are office occupations or jobs where local practical skills, like small engine repair, are in reality entry-level skills.

Strategies for Providing Vocational Education

Small high schools have developed numerous ways of providing vocational education. We summarize below a few of the major strategies:

- **Work Experience Programs.** About half the small high schools offer supervised employment experience in the community. Very often, students are employed at the school as office workers or teacher aides in elementary and preschool programs. Some schools place students in summer jobs outside the community in regional Native organizations or in the city through a school-supervised summer employment program.

  Most rural schools also take a part in the Rural Student Vocational Program (RSVP). Through this program, students travel to an urban area, live with a family there, and work at a job in their area of interest. Teachers are enthusiastic about the program—not only because it provides work experience, but also because it provides exposure to different cultural and social situations.

- **Starting a Community-Based Business.** Several rural high schools started businesses—such as a restaurant, bakery, store, snack bar, or "storyknife" enterprise (see Exhibit N).

  These business enterprises give students concrete experience in just how a business works—what costs and profits mean, how to keep books, the importance of managing inventory, the need for advertising. Teachers also use the business to teach communication skills, mathematics, and other subjects.

  These business enterprises typically thrive at first. As time passes, however, students get tired of baking bread or frying hamburgers, or carving storyknives. Much of the educational value of the business experience, however, lies in learning how to organize and run the enterprise. Even if students lose interest later on, they have learned a great deal.

- **Using Itinerant Vocational Instructors and Instructors from the Community.** Vocational education is particularly well suited to community instructors (see Exhibit O). Many local people have highly developed craft skills and are much more knowledgeable about local crafts than certified teachers new to the area.

  Several districts also used itinerant vocational instructors—for example, employing an itinerant husband and wife team to offer two-week courses in business, shop, power mechanics, and other subjects.

- **Sending Students to a Central Vocational Education Facility for Short Courses.** Some districts provided a vocational education program by building a vocational education center at a larger school and sending students from the small high schools to the center for a few weeks at a time.

  Some school districts reported positive experiences with this approach, while others did not. The director of one such center, for example, had developed a program which systematically exposed students to different occupational areas and showed them how to use and care for tools. On one of our site visits, a father proudly showed us the airtight steel stove that his son had made at the center.

EXHIBIT N

A Student-Run Business in a Small High School:
Making Eskimo Storyknives

Eskimo Story Legends and Storyknife from Kipnuk, Alaska

Students sell a packet containing a hand-carved storyknife, examples of stories, and illustrations. Villagers tell stories and illustrate them with drawings carved in the snow, mud, or sand.

The storyknife and stories you have just purchased were handmade for you in Kipnuk, Alaska, which is located in the Southwestern part of Alaska, just about three miles from the Bering Sea. The stories are what Kipnuk girls have heard from their parents and grandparents, and some of them are from their own imagination.

In Kipnuk, little girls gather around and tell each other stories, whether by personal experience or about the incidents that occur in the village. When a girl is about to tell a story, she neatly clears an area of mud so she can show the story with the tip of her storyknife while she tells the story. Usually, the storyknife would be made out of wood or more often, from ivory. The knives are made by fathers or grandfathers.

Storyknives, whether made from wood or ivory, are carved and decorated in many different styles. Both sides have similar designs and various lines are drawn onto the knives. A storyknife handle often has a picture of a bird or a fish head, with the stem decoration being a skeleton design or an ideal lifeline.

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EXHIBIT O

Community People Add Variety to the Vocational Program

In one community, the school hired a local:

- Mechanic to teach two classes in small engine repair.
- Certified welder to teach a daily course in welding.
- Dog musher, who helped the shop teacher with a class in building dog sleds.
- Airline operator, who helped team-teach a ground school class. Both students as well as adults from the community enrolled.

Other rural educators were skeptical of how much students could actually learn in a short period at a vocational education center. They did not support such centers because they expected the facility to provide job preparation, not just career exposure. Some teachers were reluctant to let students go to a center since the experience interrupted their academic program. One rural administrator confessed that his vocational center was "nothing but a misery."

- **Providing Repair and Building Services for the School and Community.** Some schools gave students practical instruction in local skills by having them help construct local homes and community buildings, repair broken equipment, and build boats and sleds for sale (see Exhibit P). These activities not only taught vocational skills, they also created community good will and the conviction that the schools were teaching students skills they could use.

Summary

Rural community people see vocational education as the weakest area of village high schools. Aware of the growing importance of the cash economy, they want job skills.

Village high schools can provide certain types of voca-

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EXHIBIT P

Vocational Education Students Finish Constructing the School

Community Point needed a new elementary school. The district had funds to build a single-story, 2,700-square-foot building. Instead, they chose to build a two-story building with a 2,400-square-foot bottom floor and an unfinished top floor.

The school hired a high school teacher who had home building skills. The next year he and the vocational education students finished the top floor. The students and teacher ordered all the materials, drew up plans for the fire marshall, helped the electrician do the wiring, hung the doors, installed the windows, put up the sheetrock, taped and textured the walls, did the painting, made and installed the trim, and laid the carpet.

The school ended up with 4,400 square feet of floor space. The students ended up with a variety of useful building skills.

tional education. Most small high schools can offer career exploration and work experience programs—through school or community jobs, the Rural Student Vocational Program, a centralized vocational facility, or special summer job programs. Most small high schools can also teach students such practical local skills as welding, boat-building, sled-making, or home repair and construction. Indeed, local high schools are far better adapted to teaching local skills than are distant boarding schools.

What village high schools typically cannot do is to offer specialized job training. Except for such areas as office occupations, specialized job training must be postponed to the post-secondary level.

This difficulty in providing specialized job training need not be viewed as a serious deficiency of small high schools. Many educators argue that vocational education—even in large comprehensive high schools—is unproductive. At the high school level, the

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best form of vocational education may well be a sound academic education.

ISSUE 3: HELPING STUDENTS BECOME COMFORTABLE AND COMPETENT IN THE WORLD OUTSIDE THE VILLAGE

The Issue

Contemporary rural adults need the skills and self-confidence to handle life in both urban areas and their community. The city and the village are becoming two different parts of the rural world. Villagers frequently go back and forth between urban and rural areas. They go to urban areas to find jobs, attend meetings, attend college, enter the hospital, visit relatives, or take a vacation.

Rural students also need urban skills because some will prefer to live outside rural Alaska as adults. When we asked rural students where they wanted to live after they finished their schooling, about a third mentioned places outside rural Alaska (Table 20). Molly Hootch herself—the rural student named in the first village high school lawsuit—moved to the Lower 48 in early adulthood.[9]

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[9]Anna Tobeluk—the rural student named in the final lawsuit—died in young adulthood. The high school in her home community was named after her.

Table 20

Students of Small High Schools Want to Live in Both Rural and Urban Areas as Adults

Students' Views About Their Future Residence	Percent
Home Community	40%
City Outside Alaska	32
Other Rural Community	10
Want to Move Around, Not Settle Down	18

N = 392

Source: ISER Small High School Study, 1984.

Students in some small high schools—those located on the highway system or in southeastern fishing villages oriented toward Seattle—already know their way around a city. Students in isolated, culturally different communities, however, often feel uncertain and unsure of themselves in urban areas.

Rural students need to become familiar with the mechanics of urban life—for example, pedestrian and stop lights, pay telephones, the bus system. But these urban survival skills are a small part of a much larger problem.

Many rural students are unprepared for the way social life is organized in urban areas. They are not accustomed to having impersonal, instrumental relationships with most people. They are not accustomed to being constantly on their own without the immediate support of friends and relatives.

Rural educators, especially those in remote, culturally different communities, worry about their students' competence outside the community. They want their students to have concrete experience in both urban and village areas so they can make informed choices about adult lifestyles.

District board presidents also worry about students' social isolation. Most of the board presidents have lived in both village and city. They understand the different demands of both settings and want students prepared for both ways of life.[10]

In contrast, most of the community residents we interviewed did not express concern about students' limited experience with the outside world (Table 17). Indeed, many community residents had difficulty understanding our interview question: "Does your high school do enough to prepare students for different cultural and social situations—like being in a city or using the bus system or speaking about their ideas to people they do not know well?"

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[10]Virtually all district board presidents have lived in both rural and urban situations. Almost 93 percent of the presidents currently live in a rural area. Most (77 percent) have lived in the Lower 48 and/or in an Alaska city. Of those who have lived outside rural Alaska, 84 percent have spent four years or more in an urban environment.

Many were unaware of the kinds of skills and attitudes the impersonal urban world demands.

Strategies to Teach Students About the Outside World

Most high schools try to increase students' competence in the outside world by sponsoring travel programs. Almost 90 percent of the small high schools send students to Alaska cities, and over 40 percent send students to other states and foreign countries (Table 21).

Table 21

Travel Programs in Small Rural High Schools

	High School Size				
Type of Travel Offered	**10 or less**	**11-20**	**21-40**	**41-100**	**Total**
Cities in Alaska	79%	88%	91%	91%	87%
Small Alaska communities	72	88	84	91	83
Lower 48/Hawaii	40	18	44	33	35
Foreign Countries	12	–	4	5	6

N = 146

Source: ISER Small High School Study, 1984.

Teachers in small high schools sometimes use the class trips as a focal point for academic work during the school year. Students learn how to organize community activities by putting together fund-raising activities (see Exhibit Q). They study the history, economy, and politics of the places they will be visiting. They practice urban survival skills. They develop writing skills by keeping journals of their trip experiences and preparing reports and presentations for the school and community.

In fact, rural students travel so frequently that many educators worry that the travel may detract from the academic program.

EXHIBIT Q

A Fund Raiser for a Student Trip

Village high school seniors raised $4,000 for their travel budget by putting on two game nights for the community. After school, the students built a shooting gallery, fish pond, ring toss, and many other games. During the game nights, the high school students ran the games, sold food, and took on other responsibilities. "The place was just packed. Participation was terrific!" said the principal.

The United States History Tour

Each year the school district sends seniors from its small high schools on an American Heritage Tour sponsored by Educational Tourism in Salt Lake City. The students visit historical sites in Washington, D.C.; New York; Philadelphia; and Boston. Students prepare for the trip by writing a research paper on the places they will be visiting.

Teachers point out, for example, that the incessant travel decimates their classes. Students might leave on a Friday afternoon for a basketball game (the plane had to leave early because bad weather was closing in) and—due to bad weather—not return until late the following Monday. Teachers point out that, while a statewide conference may take only three students from a class, in a small high school, that could be half the class. With only half or less of the class present, many teachers will not continue with planned academic work.

On the other hand, most of the principals we interviewed (70 percent) thought the current amount of travel in their school was just about right, and many (26 percent) wanted even more.

Well-Designed Travel Programs Do Increase Rural Students' Confidence and Competence

We know of two major studies evaluating the educational effects of travel programs in rural Alaska. The first, the Dillingham Foreign Study Program Evaluation, assessed the educational effects of a program through which rural students traveled to

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Japan and Spain.[11] This program operated for three years in different forms. During the first year, twenty-eight Dillingham high school juniors and seniors (mostly Native students) traveled to Japan. For three months, they toured Japan and attended classes in Japanese language, social history, and other subjects taught by Japanese university students. The Dillingham students learned how to find their way around Tokyo on their own; they decided that, if they could get around Tokyo, they could get around anywhere.

When these students returned to Dillingham High School for their second semester, many felt academically and socially constricted in a small town high school. Of the original twenty-eight students, nineteen entered the University of Alaska for the second part of their senior year, and two students entered other universities—Walla Walla in Washington and the Talent Education Institute in Japan. At the end of their first college semester, all of the non-Native students and almost 90 percent of the Native students remained in college.

The educational effects of the first year's program were so impressive that the Dillingham school administration decided to open the Foreign Study Program to students from other Alaska high schools for the following two years. As enrollment increased and staff grew, the students became a less cohesive and enthusiastic group. Neither teachers nor students were exactly sure what the travel was supposed to accomplish. Some students went to Spain rather than Japan. In its later two years, the program became much less successful: College success declined and fewer students said that the trip had made a significant difference to their development.

In short, this foreign study program had impressive educational effects when it was small, cohesive, and well-focused. However, the program had little educational value when it became large and diffuse.

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[11]Diana Holzmueller, *Dillingham Foreign Study Program Evaluation* (Fairbanks: University of Alaska, Center for Northern Educational Research, 1974).

Class Trips Have More Educational Benefit Than Other Types of Travel

The second study of the educational effects of travel programs on rural students drew similar conclusions: Some types of travel have substantial educational benefits and others do not.[12] In this study, one rural district asked students, teachers, and community people to evaluate the different types of trips sponsored by the district. These types included: (1) athletic travel, (2) individual students attending a conference or other state program, and (3) educational trips where the class traveled as a group.

All of these trips, the study found, had some benefits. They increased students' self-confidence, their concepts and skills, their interest in visiting new places, and their understanding of how to act in a new setting.

The trip having the most educational impact, the study concluded, was the class trip. When the class traveled as a group, teachers planned academic activities beforehand around the trip. Afterwards, the teacher could build on the common experience to develop new concepts and to sharpen students' analytic skills.

Summary

For students in remote, culturally different communities, social isolation is a serious limitation of village high schools. Students grow up, go to school, and graduate with the same small group of students in the same small community. The world they see on television forms their image of the world outside the village.

Most rural high schools give students personal experience of the outside world through extensive travel programs. Indeed, one of the benefits small high schools offer their students is the opportunity for educational travel.

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[12]Virginia Juettner, *Iditarod Area School District Program Evaluation: 1979-1980, McGrath, Alaska: McGrath Iditarod Area School District, 1980.* In this evaluation, community people, teachers, and students rated each trip on the extent to which it had produced gains in self-confidence, development of new skills, etc.

Whether this travel has significant educational benefits or takes up time better spent in academic work depends on the type of travel and how well it is planned. Some trips, studies have found, substantially increase rural students' confidence in themselves, their knowledge of other places, their understanding of how to act in new situations, and their analytic skills. These trips are not merely tours of the bank and the bowling alley. Effective travel becomes a focus of academic work, not a substitute for it.

ISSUE 4: RAISING LOW ACHIEVEMENT TEST SCORES

The Issue

Most rural students in village high schools score far below the national average on standardized tests (Figure 9).

Most rural students, however, also scored far below the national average on standardized tests when they went away to boarding school. In 1974, for example, high school seniors graduated from Mt. Edgecumbe with achievement test scores below the ninth grade level.[13] Rural students attending the Anchorage Boarding Home Program, the Nome-Beltz Regional High School, and the Bethel Regional High School in the early 1970s had similarly low test scores and made less than half the expected gain on standardized tests each year they attended boarding school.[14]

A number of factors, apart from the quality of instruction, combine to keep the achievement test scores of many rural students low: a different language background, the urban context in which many test items are embedded, and social traditions that do not stress academic skills.

We would like to answer the question: What effects have the village high schools had on the standardized test scores of rural students? We would like to know whether students do better or worse in village high schools compared to boarding schools. *Unfortunately, no available data allows comparisons of achievement gains in boarding schools versus village high schools.*[15]

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[13]Achievement test scores at Mt. Edgecumbe were low during the 1970s when Mt. Edgecumbe had an open admission policy. Mt. Edgecumbe students scored much higher in the 1960s when the school was academically selective, Part II, Table 8.

[14]Judith Kleinfeld and Joseph Bloom, *A Long Way From Home* (Fairbanks: University of Alaska, Center for Northern Educational Research and Institute of Social, Economic, and Government Research, 1973).

[15]Students today who go away to boarding schools usually differ in family background and other characteristics from those students who stay in village

(Footnote 15 continued on page 124)

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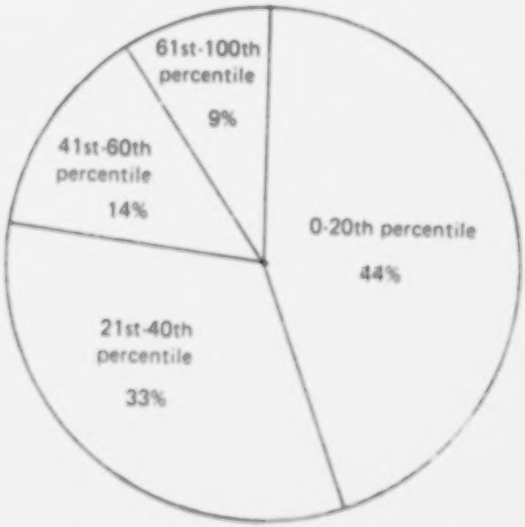
Percentage of Entire 9th-12th Grades
at Different Percentile Rankings*



Total Number of Grades Represented: 522

*Please keep in mind that these figures represent average achievement test scores for the whole grade, not scores for individual students.

Source: ISER Small High School Study, 1984.

Figure 9

Students in Rural High Schools Have Low Achievement Test Scores

Some people see the poor achievement test scores of many of today's village high school students and conclude that the *Tobeluk v. Lind* settlement has "produced the world's most expensive high schools and the most poorly educated high school students."[16] These people should be aware that current data supports neither this nor any other definitive conclusion.

Strategies to Raise Achievement Test Scores

Many rural school districts are devoting considerable effort to raising standardized test scores. Such efforts usually originate in the central office. Teachers are typically unenthusiastic about what they see as an overemphasis on test scores.

Various districts have tried such strategies as:

- Teaching students *test-taking skills*.
- *Offering monetary incentives to teachers* who raise test scores.
- *Developing a standard, district-wide curriculum* to prevent high teacher turnover in small schools from disrupting students' academic progress; *checking weekly lesson plans* and classroom tests to make sure the teacher is teaching the agreed-upon district-wide curriculum.
- *Examining the match between the district's curriculum and the standardized test* it uses, then asking the faculty to review their curriculum to ensure that classes actually cover what is on the test.
- *Developing criterion-referenced* tests which do match the district's curriculum.

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15 *(Continued from page 122)*
high schools; simple comparisons of the achievement test gains of each group would be misleading. We have no consistent information on past test gains of students at boarding schools compared to current test gains of students in village high schools.

16 Thelma Buchholdt, "Proposed Interim Work of the Hess Committee," memorandum dated April 10, 1979.

- *Talking to the community* about the problem of low test scores and *enlisting parental support* in getting students to bed early the night before the test and encouraging them to do well.

The success of these strategies is difficult to determine. In a small school or even a small school district, standardized test scores are unreliable—a fact some educators fail to appreciate. If one bright student in a class of five students is absent when the test is given, for example, that absence can lower the class average dramatically. Even when test scores go up, it is difficult to determine if the school should take credit or if the gains are due to changing influences outside the school.

Summary

Low scores on standardized tests were a serious problem during the boarding school era, and they remain a serious problem during the village high school era. We do not know if village high schools have had positive, negative, or neutral effects on test scores.

Rural school districts are well aware of the problem of low test scores. Many districts are making vigorous efforts to raise scores through such strategies as establishing a district-wide curriculum and making sure teachers teach it, instructing students in test-taking skills, matching tests to the curriculum, and enlisting parent support for raising test scores. The unreliability of test scores in small schools and districts makes it difficult to evaluate the success of these strategies.

ISSUE 5: PREPARING STUDENTS FOR COLLEGE

The Issue

Neither the small high schools nor the boarding schools that preceded them have succeeded well in preparing rural students for college. Most rural students who enroll in college do not graduate. At the University of Alaska at Fairbanks, for example, only 25 percent of Native freshmen who entered the university in 1977 remained to graduate.[17] Nationally, about 50 percent of students who enter college remain to graduate.[18]

Small High School Students Drop Out of the University of Alaska at About the Same Rate as Rural Students from Other Types of High Schools

Rural freshmen have high college drop-out rates, whether they come from small village high schools, large village high schools, or boarding schools. At the University of Alaska at Fairbanks, for example, 63 percent of entering rural freshmen did not return for their sophomore year. Students from small high schools drop out of the University of Alaska at about the same rate as rural students from boarding schools or larger rural high schools (Figure 10).

Rural Students Have Difficulty with Both the Academic Demands and the Social Demands of College Life

Many rural students want to continue their education after high school. Of those we surveyed, close to 70 percent said that

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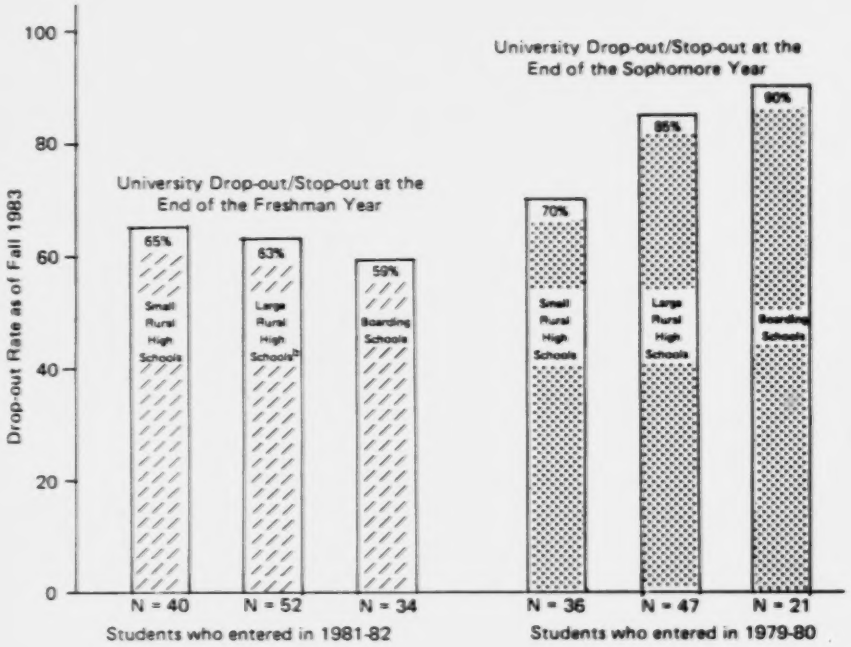
[17]Judith Kleinfeld, Robert Travis, and Velma Hubbard, *Native College Success in the Seventies: Trends at the University of Alaska at Fairbanks* (Anchorage: University of Alaska, Institute of Social and Economic Research, 1982).

[18]L.B. Mayhew, *Surviving the Eighties: Strategies and Procedures for Solving Fiscal and Enrollment Problems* (San Francisco: Josey-Bass, 1980), p. 192.



[a]Some students who "dropped out" of the University of Alaska at Fairbanks may have transferred to other schools. Our records do not differentiate transfers from dropouts.

[b]We defined "large rural high schools" as rural schools with over 100 students.

Source: University of Alaska at Fairbanks records, as analyzed by Professor Roland Wulbert.

Figure 10

Small High School Students Drop Out of the University of Alaska at About the Same Rate as Rural Students from Other Types of Schools[a]

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they wanted more schooling, and over half of these wanted to attend a four-year college program (Figure 11).

Many small high school students do not believe that their present high school program prepares them well to do college level academic work (Figure 12). They feel even less well prepared to live away from home at college.

Rural students who have experienced college life emphasize that the issue of how to prepare rural students better for college includes two quite different problems (Exhibit R). The first is improving students' academic skills. Many rural students have not yet acquired basic mathematics and reading comprehension skills. They have difficulty understanding college textbooks. Many students have little experience taking notes in a lecture, writing research papers, or talking about their ideas in a classroom of strangers.

While these academic problems create difficulties, most rural students do not leave college solely because of academic problems.

EXHIBIT R

College Skills Needed by Rural Students

Presentation given by Sandra Erlich to Northwest Arctic School District Teachers in Kotzebue, December 5, 1984:

"In college there are two sets of skills students need: academic skills and personal skills . . . .

In the area of academics, writing seems to be a big hurt among students. It shouldn't hurt by the time we got out of high school . . . .

The second area, personal skills, is a longer list. We usually expect college to come easy if we did O.K. or good in high school. Well, it doesn't come easy. There is so much more than math and English that we need to know.

Two things always go the fastest—time and money. Many students said they didn't have any idea about how to manage their time for a college life-style . . . .

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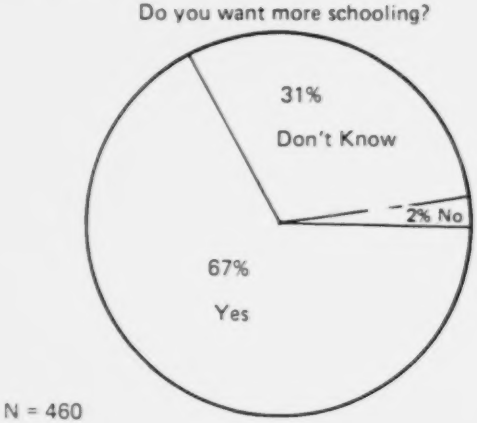
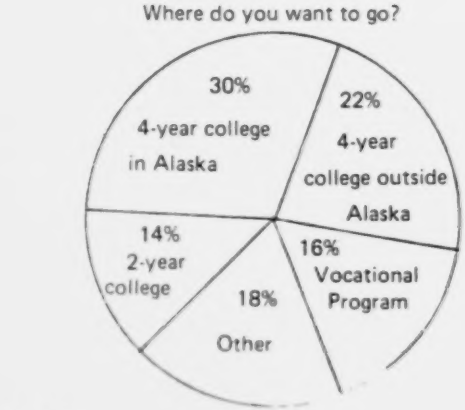


N = 460

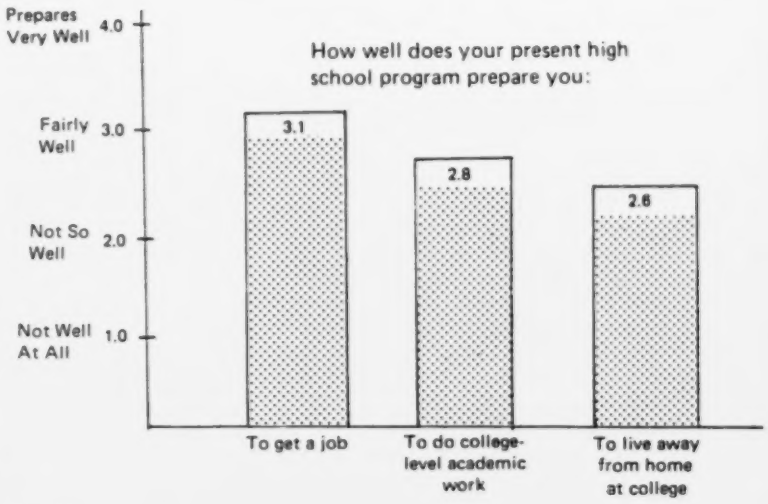


N = 307

Source: ISER Small High School Study, 1984.

Figure 11

Most Small High School Students Want More Schooling After High School


Prepares Very Well 4.0
Fairly Well 3.0
Not So Well 2.0
Not Well At All 1.0
How well does your present high school program prepare you:
3.1
2.8
2.6
To get a job
To do college-level academic work
To live away from home at college

N = 460

Source: ISER Small High School Study, 1984.

Figure 12

Many Small High School Students Do Not Feel Well Prepared to Go to College

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Many rural students drop out after a few weeks of college because they find it difficult to adjust to the social and emotional pressures of college life. Many rural students are not comfortable surrounded by people whom they do not know. Many are unsure about how to manage their time and money in the freedom of the college setting. After the social fling common among college freshmen everywhere, rural students may not be able to finesse long-postponed papers and preparation for exams. They often get homesick, worry about the family responsibilities they left behind, and go home.

Rural College Students are the Group Most Dissatisfied with Small High Schools

Of all the groups we interviewed, rural college students expressed the greatest dissatisfaction with the quality of education in small high schools. Students voiced outrage that the small high schools had not provided them with the academic skills they need for college.[19] They emphasized that small high schools needed better trained teachers, more courses, stronger mathematics and English courses, and, above all, much higher academic standards and expectations.

The Intertwined Problem: Low Academic Standards in the School and Apathy Toward Education in the Community

Many observers of small rural high schools—rural college students, rural principals, Department of Education personnel—have reached the same conclusion: Academic standards are low in many small rural high schools. Not until rural students leave high school and face the demands of college, vocational training, or army entrance tests do they realize just how badly they may be prepared for adult life (Exhibit S).

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[19]This information is based on discussions with rural college students and two brief surveys at the University of Alaska. One survey was given to forty-six rural college students enrolled in a course on Native education. The other was given to thirty-nine students enrolled in the Rural Alaska Honors Institute.

EXHIBIT S

Low Standards in Small Rural High Schools

A letter from a Department of Education Scholarship Committee Member to the Alaska Council of School Administrators

Dear ———,

I chair a DOE committee to select winners in the competition for the Robert L. Thomas Memorial Scholarship . . . .

Two of the applications left me with a sense of absolute outrage. Every year we receive similar applications. Let me describe one of the two applications.

The applicant is an 18-year-old female graduating from a rural high school. In four years of high school *she received straight A's* except for one C in skin sewing. She is enrolling in the fall at one of our U of A campuses. On the ACT, her percentile ranks are as follows: English 10, Math 1, Social Studies 9, and Natural Science 7! Can you imagine the shock this lady is going to have in her first semester at the University? Did her teachers and administrators think they were doing her a favor when they were playing the game of "let's pretend"? Did they think they were helping this student by setting her up to be absolutely devastated when she has to face the rest of the world? The whole business is so unethical, so dishonest, and so damned unfair that I wish I could personally apologize to this student.

. . . I have lost all tolerance for the intellectually embarrassing body waste that is used to support arguments for the absence of real-life standards.

Sincerely,

————

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While people agree that standards in some small high schools are low, they disagree over *why* they are low. Rural college students usually locate the problem in the teachers. In their view, many teachers do not challenge students enough, do not enforce school rules, and do not demand that students produce high-quality work. Rural college students at the University of Alaska, for example, wrote the following kinds of comments on a survey where we asked them about the problems of small high schools:

> *"You can't fail a class. All you get is an Incomplete."*
>
> *"The classes are too easy."*
>
> *"We need a major effort to upgrade the dirt-poor standards in the bush. My high school seemed more of a 'hang-out' center. I never even learned the skills I needed for college."*

A Native teacher who did a case study of the small high school graduates in her community found similar complaints about low school standards among students who stayed home:

> Now that they are out, they are not satisfied with their lives. . . . They felt the teachers did not try very hard. They felt that the teacher could have made learning better by giving more homework and by being stricter.
>
> For example, there was a teacher, Mr. X, who used to allow the students to listen to rock music during class while he sat with his feet propped up on the desk and his nose in a book. Whenever a student had a problem, the teacher gave the answer without any explanations as to how to get the answer. When a student didn't finish his homework, he would tell Mr. X that he forgot to take his books home, and the teacher would let it go at that.

Spineless, apathetic, or burned-out teachers may be part of the problem, but they are not the whole problem. Rural high school students enrolled in an honors program at the University of

Alaska, for example, pointed out an equally important element—students who refused to do the academic work the teacher assigns.

When we asked these rural honor students about the problems of small high schools, they also complained about low academic standards, but they divided the blame for low standards about equally between the students and the teachers:

Rural Honor Students' Comments About their Teachers	Rural Honor Students' Comments About their Classmates
"The rules are not enforced."	*"The students do not work hard."*
"Classes are not challenging."	*"The students are not interested."*
"The teachers go too easy on us sometimes."	*"The students pick on the teachers."*

Rural principals emphasized yet another facet of the "low standards" issue—apathy toward education in many rural communities. Indeed, principals identified "student and community apathy toward education" as the single most pressing problem facing their small high school (Table 22).[20]

From the principals' perspective, many rural parents do not press their children to do well in school because they do not really want what academic success brings—a child's leaving the community to get a job or go to college. In the community itself, doing well in school does not guarantee a good job. Employment is scarce. When a big construction project comes to town, everyone gets a job whether they have a high school diploma or not.

In short, both rural students and educators worry about the apathetic atmosphere of some small high schools. Different people place the blame on different sources: weak teachers, unmotivated students, an apathetic community, the lack of connection between educational success and adult success in rural communities.

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[20]For a particularly nice presentation of this view, see : David Finley, "Why Eskimo Education Isn't Working," *Phi Delta Kappan* 64:8 (1983): 580-581.

Table 22

Principals of Small High Schools See Apathy Toward Education, Limited Courses, and High Costs as Their Most Pressing Problems

	Most Pressing Problems
Student and community apathy toward education	31%
Too few courses and teachers	30
High costs and insufficient funds	28
Need for more space and improved facilities	16
Declining enrollments	15
Need for more cultural exposure and social life	14
Staffing (e.g. turnover, need substitutes, unqualified teachers)	11
Absenteeism, tardiness	8
Community problems (jobs, alcohol)	7
Other (maintenance, district/school conflicts)	19

N = 132

Source: ISER Small High School Study, 1984.

All these elements may well be part of the problem. A school culture develops in some rural high schools which is inimical to high academic standards. Through mutual but unspoken agreements, teachers demand little, students produce little, and parents expect little. It is essential to keep in mind that low academic standards and a school culture which supports these arrangements are not problems limited to small high schools. As the many reports on educational excellence stress, the problem is nationwide. It is especially prevalent in minority schools and in rural schools.[21]

[21]Rural educators outside Alaska similarly identify "unmotivated students" and "parental apathy toward education" as the fundamental problems of rural schools. See Faith Dunne, *Small Rural Schools in the United States: Statistical Profile* (Washington, D.C.: The Small Schools Project, The National Rural Center, undated, about 1980).

Strategies to Prepare Rural Students for College

We found two promising strategies for better preparing rural students for college. One strategy is based at the small high school itself: The school offers a college preparatory class to teach students explicitly the kinds of academic skills they will need in college. The other strategy is based on the university campus: The college offers a summer preparation program not only to teach rural students needed academic skills but also to prepare them for the psychological demands they will face in the college setting.

A College Preparation Class in a Small High School

Some small rural high schools have established specific "college preparation" classes to get their students ready for college (Exhibit T). These classes teach students how to write the research papers and the essay examinations that college requires. Teachers show students how to listen to a lecture and take notes. Instead of teaching in the ways common in small, personalized high school classes, teachers deliberately teach in the ways common in large, impersonal college classes.

EXHIBIT T

Study Skills Course Organized by a Community College in Cooperation with a Small High School

The Community College offered a course in study skills to both high school seniors and to people from the community. The community college provided the materials and employed the high school principal to do the teaching.

The class met for two hours each evening for five weeks. Every student worked on an individualized program geared toward academic problems identified in an assessment test. Study areas included mathematics, writing, vocabulary, and reading skills.

"Everyone who took this five-week course increased one-half to three-fourths of a grade level," reported the principal. "Three former course members are in college now."

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Summer College Transition Programs on Campus

Several statewide programs bring rural students to a college campus during the summer both to sharpen their academic skills and to get them used to the demands of college life. These programs include (1) Upward Bound, (2) the Della Keats Health Careers Program, and (3) the Rural Alaska Honors Institute.

The Rural Alaska Honors Institute (RAHI), for example, selects academically talented juniors from rural high schools and brings them to the University of Alaska's Fairbanks campus for a six-week college experience. Students see for themselves exactly what college classes are like. They see the kinds of academic skills they will need in college at a time when they are juniors and still have another school year to prepare themselves. Students not only improve their mathematics, writing, and research skills; they also learn how to handle such demands of college as having to stand at a podium and make a formal presentation in front of an audience. Rural students also experience bouts of homesickness and loss of nerve in a short college program where the staff expects such difficulties and knows how to support students through them.

RAHI deliberately creates stressful experiences—such as a paper due the same day as a mid-term exam—to simulate the pressures of college life. Students have the opportunity to learn in a protected setting exactly how they will do on an exam when they have stayed up all night to write a term paper.

Over 80 percent of the rural principals who had students in this program rated it as "very effective." Of the thirteen RAHI students who entered as freshmen at the University of Alaska, Fairbanks, campus in 1984, all thirteen completed the semester, and twelve returned for the spring semester.

Summary

Rural college students are the group most dissatisfied with the small high schools. In their view, they are not prepared for college because of the limited courses, generalist teachers, and especially the lax academic standards of the small high schools. Rural educators as well worry about academic standards, but they

see an economic and social dimension to the problem. Limited rural job opportunities, in their view, create little interest in education among many parents and students.

Despite these problems with college preparation in rural high schools, statistics at the University of Alaska show that rural students from small village high schools are doing about the same as rural students from larger high schools or boarding schools.

Both academic problems and social difficulties interfere with rural students' college success. Two strategies show promise as ways of overcoming these difficulties: (1) special college preparation classes in high school, and (2) summer college transition programs on a university campus.

ISSUE 6: HELPING STUDENTS MAKE THE TRANSITION TO ADULTHOOD

The Issue

The village high schools create an exceptionally safe and nurturing environment for rural young people. Is this environment too safe and too nurturing to prepare students for making their own way as adults?

Many Students Hang Around Home After High School

After listening to rural Native high school students talk about their school experience at a statewide conference, one experienced rural educator expressed a common view:

> They are not being challenged enough. They are not being pressed hard enough, not by their teachers and not by their parents.
>
> The generation is floating. Students in these high schools don't have any clear idea of how they are going to make a living. They have no vision of the future. They didn't need one a generation ago, but now people in their twenties and thirties are just sitting at home, bored to tears. They don't like themselves.

A Native teacher, doing a case study of what happened to the graduates of small high schools in her community, reached a similar conclusion. She pointed out that the situation was worse for the young men than for the young women:

> Since the high school program began, there have been forty-nine graduates. Of these, fourteen have gone on to college and two to a seminary. All have returned home after a year or less except for one seminary student. They have returned for various reasons: homesickness, lack of preparation, and no money are the three main ones.

> Of the forty-nine graduates, thirty-two are males. All the young men are single and staying at home. Many of them complain about nothing to do in the village but do nothing to change their situation.
>
> Of the seventeen females, 23 percent are married and 23 percent are single with a child. The young women do not talk about being bored as much as the young men and are not as involved with drugs and alcohol.

Other statistics on high school graduates point to the same problems. One rural school district, for example, did a careful follow-up study of the 1980 to 1982 graduates of its small high schools. It found:

> Only 29 percent of the responding graduates indicated that they were presently employed. In some villages, employment is zero percent. Even for the graduates that are employed, 40 percent stated that they were working less than one-half the time. [22]

Small high schools have not caused the difficulties which rural students experience in making a transition to adulthood. The same difficulties occurred during the boarding school era.

Indeed, in the boarding school era, many people blamed the boarding schools for the problem: The reason young adults just hung around home after high school, the argument went, was that the boarding schools had taken them out of the village during the crucial adolescent years. Students acquired tastes for modern conveniences at boarding school, but they did not acquire the skills and dispositions necessary to satisfy these tastes. Because they were away from the village during adolescence, the students had not learned subsistence skills. Many were caught between two cultures—but were comfortable or competent in neither.

The high school—whether it is a village school or a boarding

[22]Richard E. Carlson, *Report on the District-wide Graduate Follow-up Study of the Classes of 1980, 1981, and 1982* (Unalakleet, Alaska: Bering Straits School District, May 24, 1983).

school—is not the main cause of the difficulties some rural students have in finding a satisfying adult role. The situation has many causes: the shortage of wage work in rural Alaska; dislocating cultural change; the discrimination and victimization that young people encounter in the city; pressures from parents and peers to remain in the village; and the difficulty young Native people have in identifying desirable role models (Exhibit U).

The small high schools have not caused the problem, but they are not helping to solve it either. If we take a broad view of the socialization system our society has organized for rural young people, we see a high school period characterized by intense nurturing and support, followed by an abrupt withdrawal of support at graduation. During high school, students learn in a small, personalized setting with a helpful teacher close by. After high school, students are thrown on their own.

For urban as well as rural young people, the early adult years are a difficult stage of life. As Levinson shows in his study of adult development, it is a myth that urban young people settle down in their early twenties.[23] Most of them explore, experiment, and flounder around until they are close to thirty years of age.

Many village young people lack the support that their urban counterparts can count on during this difficult early adult period. Village young people are much less likely to have an uncle who can call in a favor and get them a job. They are much less likely to have a father whose business they can always fall back on. They are much less likely to have parents who know the system; who have thought seriously about their child's particular constellation of talents and limitations; and who can give guidance, emotional support, and financial help during the young adult years.

---

[23]Dan Levinson, *The Seasons of a Man's Life* (New York: Alfred A. Knopf, 1978).

EXHIBIT U

An Interview with the Mother of a Rural High School Graduate

Jimmy's mother cleared away a place at the kitchen table so I could interview her for the Small High School Project. Jimmy was sprawled in a recliner in the living room, watching an afternoon soap opera on television.

Jimmy is twenty years old, a graduate of a small high school. He spent his freshman through junior years at an Anchorage high school, however, before the family moved back to the community.

I started to ask his mother about the advantages and disadvantages of small high schools. Jimmy got up, flipped off the television set, and walked out.

Jimmy's mother used the interview to vent her frustration, not about the small high schools (which she though well of), but about Jimmy's situation. He didn't want to live at home, his mother explained, but he didn't want to leave home either. His entire family lived nearby. She pointed down the street toward the homes of each of her sisters and brothers and all of Jimmy's cousins.

That summer, Jimmy had worked for a month repairing the village water system. When that job ended, he went to Anchorage and worked for four months at an auto parts store. He got laid off. When his money ran out, he came home.

"The kids come back home, and they've lost all their confidence," his mother said. "They get $70 in their pocket, drive to Anchorage, party, watch TV in a motel room, and come back home. What's the sense of that?"

"He tried to get into electrician's school," she continued, "but the test required math. Now he wants to go to heavy equipment operator school, but that's real expensive."

"Our biggest problem," she said, "is the young adults. The high school kids look at the young adults and wonder if they themselves have any future."

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A Promising Strategy for Helping Rural Students Make the Transition to Adulthood: The Postsecondary Counselor in the School District Office

Rural schools have developed few strategies for helping rural young people make the transition to adulthood. This is understandable. The immediate problems of constructing high school buildings, developing a district-wide curriculum, and establishing sound programs in unconventional circumstances have absorbed the attention of rural districts. In addition, the high school as an institution does not traditionally take responsibility for students after graduation.

We did find, however, an exceptionally promising approach in one district—a post-secondary counseling program. The post-secondary counselor, located in the district office, opens a file on students when they are about to graduate from high school. The counselor shows students how to fill out the maze of college admission forms and financial aid applications. (He also keeps copies for himself in case the students lose them.)

The counselor accompanies students to interviews for apprenticeship programs. He talks to them about the impression they are making if, for example, they come to an interview with liquor on their breath. He visits students on campus and interprets students' reactions to people who do not know them. ("This psychologist thought the kid was nuts because he looked at an ink blot and said he saw someone skinning an animal. I had to tell the psychologist that, in the bush, it's normal to skin animals.")

Students at college who need advice telephone the counselor during a crisis, sometimes during the middle of the night. College staff call him to get background information on students having problems. The postsecondary counselor also routinely visits the students away at school, as well as their relatives in the villages, reassuring everyone that everything is all right.

We came to call this postsecondary counselor program the "Freelance Father" program because the counselor resembled a cautious father—eager to help but anxious not to interfere, alternately bolstering students and bawling them out.

The program's initial success was impressive. Of the 154 district graduates who enrolled in postsecondary institutions during the two years of the program, only 15 percent dropped out.

In this district, the postsecondary counselor works primarily with students going on to higher education. The approach could also be used, however, to help rural students find employment and help them through the rough spots on a job.

Postsecondary counseling adds one more burden to an already overburdened school system. Rural school districts, however, do occupy a strategic position to provide this type of assistance. Experienced school staff typically know the students well—their abilities, personalities, and family situations. School staff also know how the postsecondary system works and how to locate jobs. Few other rural institutions enjoy the stability, the financial resources, the expertise, and the legitimacy of the schools.

PART V:
Conclusion

The urban skeptic looks at the small high school and says, "This thing can't work. This thing isn't a real high school. A real high school has departments, electives, labs, a library, dances, drama clubs, athletic teams, and a band. Whatever this thing is—maybe supervised correspondence study—it is not a real high school."

These skeptics do not actually need to see a small high school to be convinced it does not work. They know it cannot work—by definition; the small high school does not meet specification standards for a real high school.

Most of the community people, school board presidents, and rural high school principals we interviewed had a different perspective. In their view, each alternative—the small high school at home or the boarding school away from home—has its advantages and its drawbacks. On balance, they thought the village high school should remain the backbone of the rural secondary system.

When village students attended the boarding schools, they enjoyed the benefits of a large facility and specialized teachers and a variety of courses. Many students, however, dropped out. The cultural dislocation created social and emotional problems.

While village high schools have reduced these problems, they have, in turn, created new ones. On the positive side, high school graduation rates have climbed. Families can remain together. Parents can keep an eye on their children, enjoy them, and take part in their lives. Communities that wish to do so can use the high school to pass on the subsistence skills, practical skills, history, and language that continue to have economic and cultural importance.

With its basketball games and open gym nights, its community newspaper and adult education classes, the small high school has become a focus of village life. The high school's educational impact extends beyond the high school students themselves. Members of the older generation, who often have little formal schooling, learn what a high school is and does. The high school

educates a generation together, rather than separating young people into two distinct groups: the high school graduates, educated outside the community, and the high school dropouts, who came back. The local high school is an integrative, cohesive force in communities that are undergoing rapid change.

But just as the social problems of the boarding school period created pressure for local high schools, so the educational problems of the village high schools create pressure to return to boarding schools. Should not village students have the same opportunity as urban students to enjoy the specialized programs, activities, swimming pools, and other amenities of a large, comprehensive high school? The village high schools offer few courses, teachers, and activities. Vocational education is weak. An apathetic school culture and low academic standards pervades some schools. Students have few opportunities to experience urban life. Should not village students have "equality of educational opportunity?"

"Equality of opportunity" is a consideration with weight, but it is also a slippery slogan. As Kieran Egan points out:

> One way of viewing the history of schooling over the past century and a half in the West is as a generally successful struggle waged by the centralized states against church, family, locality, and class interests for control of the institutions, particularly the schools, that initiate children into the life of the society. Prominent among the weapons of the state have been the slogan 'equality of educational opportunity.' [24]

Village high schools have enabled Alaska's rural communities to escape standardizing pressures, at least for now. The schools, at their best, offer a localized education.

In some communities, "localized" means a dual education, education both emphasizing cultural subjects and conventional subjects. In other communities, "localized" means a standard academic education emphasizing college preparation. Educational

[24]Kieran Egan, "Educating and Socializing: A Proper Distinction," *Teachers College Record* 85:1 (1985): 29.

standardization brings a superficial "equality" but it precludes the customized education characteristic of localized high schools at their best.

There is no perfect solution to the dilemma of small local high schools versus distant boarding schools. In choosing one option or the other, we are fundamentally choosing which set of problems we will deal with. Should we choose boarding schools and deal with the social and emotional problems and high drop-out rates of students far away from home? Or should we choose small local high schools and deal with the problems of limited numbers of teachers, few specialized courses, and dual academic standards?

Most of the community people and rural educators we interviewed chose village high schools, but they hedged. They wanted village high schools, but also a boarding option. Some students are too advanced academically for the program a small high school can offer. Others have family difficulties that make a school outside the community a better alternative.

Providing village students with a boarding option is one solution to the dilemma of rural secondary education. It is not a perfect solution. It makes high schools that are already too small even smaller. It drains funds from the village high schools and makes these schools less able to offer the innovative educational programs—the travel and computers and community instructors—that help these schools overcome the limitations of small size and remote location.

The fundamental question, however, is not whether to provide a boarding school option, but how to provide a high-quality education in a small high school. Despite the opening of the Mt. Edgecumbe boarding school, most rural secondary school students will remain in small high schools.

Providing a high-quality education in a very small school is far from impossible. Many small high schools, even those with fewer than ten students, are doing it. These schools, many people argue, offer a better education than most rural students would receive in a large, comprehensive school. In a small school, rural students receive intense tutorials and individual care. They are

active participants in school life. In a large urban school, rural students easily become the marginal students, pushed to the fringes of school life.

Small high schools cannot offer the diversity of teachers, advanced courses, and varied extracurricular activities of large comprehensive high schools. Many schools, however, have developed ingenious ways to reduce these limitations. Specialized subject area teachers share elementary and secondary teaching assignments. Community instructors teach in their areas of expertise. Itinerant teachers provide specialized courses. Students learn vocational subjects by doing the finish work on the upper story of the school building, starting a bakery, or operating a repair shop for the community. Many of Alaska's small high schools have developed innovative educational proprograms that large schools would envy.

While some small high schools do offer an excellent education, others do not. In some communities, a climate of apathy pervades the educational program. Rural graduates speak bitterly about the low academic standards in some small schools that have left them unprepared for college, jobs, or life outside the community.

Whether a rural high school creates a sound educational program depends largely on the quality of the staff and their ability to forge an educational partnership with the community. Small size, distant bureaucracies, and the lack of time-honored tradition make village high schools exceptionally open to influence. A good staff can turn a foundering school into a fine one, but their accomplishments may not last beyond their stay. The malleability of these small schools is at once their greatest opportunity and their greatest weakness.

In his study of a small rural high school in Maine, Gjelten points out that small size brings opportunities, not only problems. What prevents a small high school staff from taking advantage of their opportunities, he concludes, is not a lack of good ideas: "It is more often a lack of spirit, will, and energy." [25]

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[25]Tom Gjelten, *Schooling in Isolated Communities* (Portland, Maine: North Haven Project for Career Development, 1978), p. 97.

The cloud of skepticism hanging over Alaska's small rural high schools makes it harder for them to succeed. This skepticism undermines the confidence that rural communities and rural educators have in their schools and what can be made of them.

It is time to dispel this cloud of skepticism. It is important to realize that small high schools have advantages, not only limitations. It is important to recognize that village high schools did not suddenly create many of the critical problems of cross-cultural education—low achievement test scores, high rates of college drop-out, difficult transitions to adult roles. We need to deal with these persistent, stubborn problems. But we also need to celebrate these rural communities and rural educators who do provide a great education in a small school.

Appendices

TABLE A-1

Mathematics Courses in Small High Schools

	High School Size				
	10 or less	11-20	21-40	41-100	Total
Business Math					
Separate Course	65%	58%	64%	50%	61%
Topic in a Course	26	27	19	39	26
Not Offered	9	15	17	11	13
	100%	100%	100%	100%	100%
Algebra					
Separate Course	93%	92%	98%	95%	95%
Topic in a Course	7	6	2	–	4
Not Offered	–	2	–	5	1
	100%	100%	100%	100%	100%
Geometry					
Separate Course	71%	76%	89%	95%	81%
Topic in a Course	17	15	2	–	10
Not Offered	12	9	9	5	9
	100%	100%	100%	100%	100%
Trigonometry					
Separate Course	34%	19%	26%	32%	28%
Topic in a Course	18	18	20	21	19
Not Offered	48	63	54	47	53
	100%	100%	100%	100%	100%
Calculus					
Separate Course	14%	4%	11%	21%	12%
Topic in a Course	8	7	13	21	11
Not Offered	78	89	76	58	77
	100%	100%	100%	100%	100%
Computer Science					
Separate Course	59%	59%	80%	95%	71%
Topic in a Course	31	26	7	5	18
Not Offered	10	15	13	–	11
	100%	100%	100%	100%	100%

N = 146

Source: ISER Small High School Study, 1984.

TABLE A-2

Science Courses in Small High Schools

	High School Size				
	10 or less	11-20	21-40	41-100	Total
Biology					
Separate Course	84%	91%	98%	95%	92%
Topic in a course	14	6	2	5	7
Not Offered	2	3	–	–	1
	100%	100%	100%	100%	100%
Chemistry					
Separate Course	48%	47%	63%	75%	56%
Topic in a Course	19	16	10	10	14
Not Offered	33	37	27	15	30
	100%	100%	100%	100%	100%
Physics					
Separate Course	40%	24%	43%	67%	40%
Topic in a Course	17	28	15	11	18
Not Offered	43	48	42	22	42
	100%	100%	100%	100%	100%

N = 146

Source: ISER Small High School Study, 1984.

TABLE A-3

Foreign Language, Art, and Music Courses in Small High Schools

	High School Size				
	10 or less	11-20	21-40	41-100	Total
Foreign Languages					
Separate Course	17%	13%	13%	45%	19%
Topic in a Course	5	6	–	–	3
Not Offered	78	81	87	55	78
	100%	100%	100%	100%	100%
Band/Orchestra					
Separate Course	15%	16%	44%	80%	35%
Topic in a Course	9	–	2	–	3
Not Offered	76	84	54	20	62
	100%	100%	100%	100%	100%
Music					
Separate Course	39%	33%	37%	47%	38%
Topic in a Course	28	24	21	5	21
Not Offered	33	43	42	48	41
	100%	100%	100%	100%	100%
Art					
Separate Course	46%	44%	48%	63%	49%
Topic in a Course	24	27	12	11	19
Not Offered	30	29	40	26	32
	100%	100%	100%	100%	100%

N = 146

Source: ISER Small High School Study, 1984.

TABLE A-4

Vocational Education in Small High Schools: Computer Programming, Business, and Office Skills

	High School Size				
	10 or less	11-20	21-40	41-100	Total
Business/Office Skills					
Separate Course	63%	73%	73%	80%	71%
Topic in a Course	25	18	14	15	18
Not Offered	12	9	13	5	11
	100%	100%	100%	100%	100%
Business Management					
Separate Course	28%	24%	27%	24%	26%
Topic in a Course	14	21	21	41	22
Not Offered	58	55	52	35	52
	100%	100%	100%	100%	100%
Computer Programming					
Separate Course	40%	47%	67%	69%	55%
Topic in a Course	30	31	13	26	24
Not Offered	30	22	20	5	21
	100%	100%	100%	100%	100%
Running a Small Business					
Separate Course	8%	26%	26%	40%	23%
Topic in a Course	23	22	9	25	19
Not Offered	69	52	65	35	58
	100%	100%	100%	100%	100%

N = 146

Source: ISER Small High School Study, 1984.

TABLE A-5

Vocational Education in Small High Schools: Industrial Arts and Work Experience

	High School Size				
	10 or less	11-20	21-40	41-100	Total
Welding					
Separate Course	28%	55%	58%	72%	50%
Topic in a Course	18	13	19	28	19
Not Offered	54	32	23	–	31
	100%	100%	100%	100%	100%
Wood Shop					
Separate Course	41%	91%	85%	100%	77%
Topic in a Course	16	3	9	–	8
Not Offered	43	6	6	–	15
	100%	100%	100%	100%	100%
Home Construction					
Separate Course	20%	29%	37%	42%	31%
Topic in a Course	9	25	28	37	23
Not Offered	71	46	35	21	46
	100%	100%	100%	100%	100%
Supervised Employment					
Separate Course	35%	26%	45%	35%	36%
Topic in a Course	16	19	4	20	14
Not Offered	49	55	51	45	50
	100%	100%	100%	100%	100%

N = 146

Source: ISER Small High School Study, 1984.

TABLE A-6

Localized Subjects in Small High Schools, by Student Ethnicity

Type of Instruction	Ethnicity of School: 20% or less Native	21-79% Native	80-100% Native	Total
Land Claims, Native Corporations and other rural issues	44%	89%	96%	89%
Local economic skills such as trapping, small engine repair	71	83	89	85
Community history and cultural traditions	38	71	88	80
Bilingual programs designed to maintain Native language	6	16	79	62
Bilingual programs designed to help with English	13	17	66	53

N = 142

Source: ISER Small High School Study, 1984.

TABLE A-7

Sports Programs in Small High Schools

Sports Activity Offered	High School Size				Total
	10 or less	11-20	21-40	41-100	
Basketball	42%	79%	92%	100%	75%
Volleyball	51	85	78	85	72
Cross-Country Skiing	47	56	53	48	51
Wrestling	20	44	51	65	42
Track/Cross-Country Running	49	59	62	91	40
Cheerleading	9	27	55	91	40
Native Olympics	16	38	40	24	30
Swimming	2	3	9	14	6

N = 147

Source: ISER Small High School Study, 1984.

TABLE A-8

Clubs and Activities in Small Rural High Schools

Type of Club or Activity	High School Size				Total
	10 or less	11-20	21-40	41-100	
Yearbook/Newspaper	64%	94%	94%	95%	85%
Student Council	62	97	91	100	85
School Dances/Roller Skating	49	88	75	90	72
Hobby Clubs	22	47	19	38	29
Vocational Clubs	4	24	21	35	19
Academic Clubs	9	12	17	19	14

N = 146

Source: ISER Small High School Study, 1984.

TABLE A-9

Athletic Activities in Small High Schools

Number of Athletic Activities Offered*	High School Size				Total
	10 or less	11-20	21-40	41-100	
None	13%	–	2%	–	5%
One only	24	3	–	–	8
Two–Three	34	24	27	10	26
Four–Five	29	61	48	57	46
Six or more	–	12	23	33	15

N = 147

*These include only major athletic activities: basketball, wrestling, volleyball, cross-country skiing, Native Olympics, track or cross-country running, cheerleading, and swimming. Some schools offer other athletics, but we do not count these activities here.

Source: ISER Small High School Study, 1984.

TABLE A-10

Facilities and Services in Small High Schools

	High School Size				Total
	10 or less	11-20	21-40	41-100	
Separate high school	33%	59%	57%	76%	53%
Gym/multi-purpose room	62	97	96	95	86
Library	73	94	94	95	88
Guidance counselor	29	27	57	76	44

N = 146

Source: ISER Small High School Study, 1984.

TABLE A-11

Attendance Rates in Small Rural High Schools*

90% or greater	83%
80–89%	12
Below 80%	5
Total	100%

N = 147

*Some high schools report problems with class cutting and tardiness, although attendance rates are high.

Source: ISER Small High School Study, 1984.

APPENDIX II
METHODS

To obtain different perspectives on the village high schools, we used multiple methods, visited diverse communities, and interviewed people with quite different frames of reference. The five components of this multi-site, multi-method study are described below.

Five Study Components

1. Interviews and Surveys of All Small High School Principals.

We interviewed the principal or principal teacher of each small high school in the fall of 1984. Most interviews were conducted by telephone and required between 30 to 90 minutes to complete.

We conducted personal interviews with principals or principal-teachers during our thirty-two site visits. (Half the site visits were done in the spring of 1984. To ensure that our information was current, however, we also reinterviewed by telephone in the fall of 1984 the principals at the sixteen sites we had visited in the spring of 1984.)

These interviews focused on the principals' views of the advantages and disadvantages of village high schools, their satisfaction with different areas of the high school program, their perceptions of school needs, and their descriptions of any innovative programs or instructional strategies the school was using.

These principals were experienced rural educators:

- Over 90 percent had worked one or more years at the school.
- Almost 85 percent had worked two years or longer in rural Alaska.
- Almost 75 percent had worked two years or longer in their districts.

Of the 162 principals or principal teachers, 97 percent completed interviews either on the telephone or during site visits.

In addition to being interviewed, each small high school principal completed a written survey. This survey requested basic descriptive information on the school and its programs: numbers of students and teachers, background of teachers, courses offered, extracurricular activities offered, services the school provided to the community, and so on. The response rate for this mail-out survey was 91 percent.

2. Site Visits to Thirty-Two Village High Schools Randomly Selected by Size and Region.

We made site visits to thirty-two small high schools for two primary reasons. First, we wanted to interview community people and students who typically do not respond well to a telephone interview or a mail-out survey. Second, we wanted to obtain a more realistic and detailed picture of small high schools through direct observation. The site visits lasted between one and three days, depending on the size of the school.

We divided the 162 small high schools by region (Southeastern, Southcentral, Southwestern, Interior, and Northwest) and by size (10 or fewer students, 11-20 students, 21-40 students, and 41-100 students). We randomly selected two schools from each region in the two smaller size categories. We randomly sampled one school from each region in the two larger size categories. We over-sampled smaller schools because our purpose was to examine *small* high school needs. We expected to find that very small high schools had more problems because of their small size. Also included in our analysis are two exploratory sites, which we visited

for the purpose of pretesting our research approach and measures.

We emphasize that these site visits provide *illustrative* information on student and community views. Statistically, to generalize from a sample of thirty-two sites to a population of 162 sites would be invalid. We do, however, have confidence in our basic results because they are so consistent across regions and schools of different sizes.

During the site visit, we interviewed each community school committee (CSC) member. If any CSC members were absent, we substituted parents of high school age students. We also interviewed community people who worked at the high school as teachers or teacher aides. The community interview covered perceptions of the advantages and disadvantages of small high schools, preferences for local high schools and boarding options, and satisfaction with different aspects of the high school program (vocational education, college preparation, cultural heritage, and so on).

We gave all high school students surveys in which we requested their views of the advantages, disadvantages, and improvements needed in small high schools. In addition, we talked informally with high school students. We interviewed the principal and many of the teachers. We observed classes and other activities in the schools. Finally, we collected information on class schedules, achievement test scores, needs assessments, follow-up studies, and so on.

3. Interviews with School Board Presidents.

The school board presidents are the chief representatives of the communities in their districts on educational matters. We conducted telephone interviews with thirty-one out of thirty-five (about 90 percent) of the school board presidents whose districts included a small rural high school. These interviews were conducted under the auspices of the Alaska Association of School Boards, which has close relationships with school board members.

The interview focused on the board presidents' perceptions of the strengths and weaknesses of the small high schools, educa-

tional strategies used by their districts, and suggestions for strengthening small high schools.

4. Collection of Achievement Test Scores and Writing Samples.

We are well aware of the problems involved in using standardized achievement test scores to measure school achievement in culturally different communities. Due to very small class size, multigrade classes, and students' lack of experience with the urban context in which many of the test items are embedded, achievement test scores from small high schools tend to be unreliable. Nonetheless, we needed some measure of achievement, and standardized test scores are the commonly accepted measure.

We collected standardized test scores for rural high schools either during our site visits or from the district office. Although achievement test information raises sensitive issues, most districts responded to our requests for this information. We received test scores from 95 percent of the small high schools.

The weaknesses of the test scores make the reporting of results difficult. Different districts use different standardized tests, and one test is not strictly comparable with another. Differences also occur in administration and reporting: Some districts, for example, report scores of special education students together with those of other students, while others do not. Finally, the privacy issue means that we can obtain scores for classes but not for individuals. Thus, we report the distribution of class averages, not the distribution of individual scores.

To minimize the effects of districts using different tests and the unreliability of test scores, we have chosen to report achievement test scores in broad categories according to national percentile rankings. For example, we lump together schools whose average scores for a particular grade level fall at or between the 21st and 40th percentiles. Our data do not enable us to calculate perhaps the most valuable statistic from test scores: individual student achievement change over time. To compare current achievement growth in the small high schools with that of the earlier boarding programs would require this statistic.

To look at achievement from another angle, we collected writing samples—essays, poems, stories, and so on—at the schools we visited. While these are interesting as illustrative material, analyzing them would yield little, since they were not produced under comparable conditions.

5. In-Depth Studies of Small High School Issues by Local Native and non-Native Educators.

Any research design involves trade-offs between depth and breadth. If researchers spend their resources—time, energy, and funds—studying a few sites in depth, they lose the broad picture. They do not know how representative of other situations their case studies may be.

Conversely, if the researchers spend their resources collecting information from a large number of sites, their picture of the situation will be superficial, lacking richness and complexity.

In our study of small high schools, we used both survey methods which provide breadth and site visits which provide some depth. Such brief site visits as we conducted cannot compare, however, with the insights and the understanding gleaned in case studies.

To obtain a richer view of village high schools, we worked with six Native teachers, one Native education student, and three non-Native teachers in rural Alaska on in-depth studies of the village high schools in their communities. The participants completed this research as part of a university course in research methods.

Consistency of Information Across Components

Each of these five components yielded some information which overlapped the information we received from another study component. We received information on community attitudes toward small high schools, for example, from: (1) short site visits, where we interviewed local school board members; (2) in-depth studies by Native educators; and (3) high school principals, who described community views. Information obtained from different sources was highly consistent.